Special Presentation on Project 43
Kansas City Emerging Technology Forum
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Good morning. I'm APCO's Executive Director and CEO Derek Poarch, and it's my pleasure to speak to you about APCO's just announced Project, Project 43: Broadband Implications for the PSAP.

Let me begin by just tossing out a few questions to those in the audience that have experience working in a PSAP. By show of hands:

1. Raise your hands if you already fully understand how deployment of FirstNet is going to impact PSAP operations.
2. Do you know exactly what Next Generation 9-1-1 means? Better yet, do you think there's a common understanding of what NG9-1-1 means?
3. Are you comfortable with how the general public, who are using smartphones with all kinds of broadband capabilities, are going to interact with the PSAP of the future?
4. Do you know what the PSAP of the future is going to look like?
5. How many think your PSAP is ready for all of these new broadband-related developments?

Well, of course I'm not surprised by your reactions. The bottom line is that a number of major, broadband-based developments are leading to a paradigm shift in the role of the PSAP. Implementation of a new nationwide, interoperable public safety broadband network led by FirstNet will place broadband communications into the hands of first responders. Next Generation 9-1-1 technology will enable PSAPs to utilize broadband data in ways that will transform how the public reaches 9-1-1 and how telecommunicators communicate with first responders.

Recently, we put some thought into how NG9-1-1 should be defined, so that there is a common understanding of the term and recognition of the central role of the PSAP. What we came up with is that NG9-1-1 is a nationwide, standards-based, all-IP emergency communications infrastructure enabling voice and multimedia communications between a 9-1-1 caller and a 9-1-1 center, and on to responders in the field.

IP-based technologies, including those supported through smartphones, tablets, and mobile apps, are widely prevalent throughout the general public and are capable of sending an array of information to the PSAP. As a result, PSAPs of the future will be a nerve center, managing data-rich communications via broadband technology with 9-1-1 callers and first responders.

Briefly put, technology is changing at an incredibly rapid pace, and we need to make sure our community is prepared for what's coming. I've been in public safety for more than three decades. My first public safety position was as a telecommunicator. I retired as a police chief, and before coming to APCO, I served as the first Chief of the FCC's Public Safety and Homeland Security Bureau. It wasn't that many years ago that emergency calls all came from landlines. And the idea of seeing live video from an incident scene was science fiction. If the last 5-10 years are any indication, a public safety professional starting his or her career today will see changes that dwarf what most of us have seen.

The PSAP of the future will have new technologies sending and receiving information in ways that will be unlike anything we've seen before. Our colleagues must have answers to questions, and in some cases we need to identify the questions we didn't know to be asking. The goal of Project 43 is to help telecommunicators, public safety answering points, 9-1-1 authorities, and others in the public safety

community to understand existing technology capabilities and prepare for the evolving broadband communications technologies that will impact PSAP operations and, at the same time, improve support to emergency responders.

Before I go into more detail on Project 43, I'd like to provide a brief overview of how APCO Projects work. APCO's Project Series has been part of the Association since the 1960s. Its purpose is to provide a framework for exceptional efforts of the association, and a means by which governmental agencies, foundations, profit and non-profit corporations, and other organizations and individuals with interests in the public safety communications field, may cooperate in APCO efforts.

Some past projects that you might be familiar with include Project 25 to establish the technical standards for digital communication systems for public safety, and Project 33, which created a formal recognition program for public safety communications training programs that meet APCO's Minimum Training Standards for Public Safety Telecommunicators.

This past January, consistent with APCO's Bylaws, President Brent Lee made a proposal to APCO's Board of Directors for the launch of a new Project; number 43 to explore the impacts of broadband on the PSAP and provide education, guidance, and focus to our PSAPs and 9-1-1 authorities for the benefit of the entire public safety communications community. The proposal was approved, and APCO announced the launch of Project 43 last month.

The Project chair will be Steve Proctor, an APCO past president with 45 years of public safety communications experience, including current service as executive director of the Utah Communications Authority that operates a statewide interoperable radio network, manages the state's 9-1-1 fund, and provides systems support to more than 200 public safety agencies and 39 dispatch centers throughout the state. He will be supported by APCO staff and a large group of volunteers.
To address the substantial and wide-ranging broadband implications for the PSAP, Project 43 includes six working groups that will focus on governance, cybersecurity, operations, technical, staffing, and training issues. They'll each be led by professionals from around the country. I'll now briefly describe each group's scope.

Governance, Chaired by Tina Mathieu, Executive Director, Weber Area Dispatch 911 in Ogden, UT.

We know that there are some jurisdictions with governance frameworks that can and have facilitated the successful adoption of broadband technologies, and there are other frameworks, laws, and regulations that serve as impediments.

The governance working group will identify and provide recommendations related to coordination within and between 9-1-1 PSAP jurisdictions, emerging liability issues to include privacy concerns resulting from the implementation of broadband technologies, state and local governance structures, and reforms to legal and regulatory frameworks, needed to facilitate the adoption of broadband technology receiving, recording, documenting and transmitting capabilities.

Cybersecurity, Chair to be named.

As you'll hear during presentations this afternoon, public safety systems are vulnerable to cyber attack. This is true for legacy systems, and it is increasingly true for next generation, IP-based systems.

The cybersecurity working group will identify and provide recommendations regarding multiple aspects of cybersecurity related to the implementation of broadband-based technologies such as FirstNet and NG9-1-1, including those aspects of cybersecurity that relate directly to the PSAP ecosystem such as an examination of ingress and egress points to and from the PSAP, between the public and the PSAP, and the PSAP and field responders. The resulting recommendations will include strategies related to physical security, network security, best practices for both technical and operations personnel, and proposed modifications to existing standards for assisting PSAPs in preparing a cyber defense strategy.

Technical, Chaired by Mike Muskovin, Customer Support Manager for Motorola Solutions, Inc.

Of course, broadband implications for the PSAP include a significant technical piece. Equipment in the PSAP will change in the coming years, from CAD to logging systems.

The technical working group will examine and provide recommendations regarding the technical implications to the PSAP of broadband-based technologies such as FirstNet and NG9-1-1 as they relate to the PSAP ecosystem. This will include an examination of all equipment and systems such as CAD, logging equipment, dispatch consoles, etc. necessary to deliver and process IP-based communications from the point of entry into the PSAP to dispatch, for management of field resources and through to the complete documentation of the incident. The technical working group will also evaluate existing consensus-based standards, best practices, and open system architectures, and make recommendations for improved standards and practices as deemed necessary.

The next three working groups are a little different. While I wouldn't say the tasks for one group are more important than any other, these are certainly more focused on the human element. When we start talking about PSAPs receiving live video and photos from the public "calling" 9-1-1, a live feed from body cameras worn by first responders, and trying to manage these information flows, we're looking at potentially huge changes to operations, staffing, and training.

Operations, Chaired by Steve Souder, Director of the Fairfax County, VA Department of Public Safety Communications.

The operations working group will identify and provide recommendations related to emerging policy issues and concerns that will occur within a PSAP as they relate to the processing of broadband technologies to include FirstNet and NG9-1-1. Model policy development will include but not be limited to 9-1-1 call processing, computer aided dispatch, records management, use of recording and retention systems as well as dispatch console radio operations. The operational working group will evaluate a variety of potential policy solutions and analyze existing consensus-based standards and best practices and recommend improved standards and practices as deemed appropriate.

Staffing, Chaired by Chris Fischer, Retired Executive Director of the Valley Communications Center in Kent, WA, and a former APCO President.

When it comes to staffing, the additional data and enhanced role of the PSAP as the nerve center of public safety communications could mean that more personnel are needed. It at least means it should be examined. We will.

The staffing working group will examine the implications of the PSAP of the future's ability to accept, document, transmit and retain for evidentiary purposes texts, videos, photos, telemetry data, and more, and the staffing expertise that will be needed to accommodate these advanced communication methods. It will conduct a detailed comparative analysis and report on the numbers of staff positions needed compared to today's PSAP staffing, as well as an examination of the knowledge, skills, and abilities

necessary for the 9-1-1 telecommunicator of the future working in a broadband-capable PSAP. The staffing working group will also consider the staffing implications of potential workload sharing between PSAPs, enhanced mutual aid opportunities, and managing the exposure to critical incidents and workforce burnout.

Training, Chaired by Mindy Conner Adams, Training Coordinator, Denco Area 9-1-1 District in Lewisville, TX.
Finally, the introduction of new technologies and policies means new training.

The training working group will explore and recommend entry level, initial/orientation, and on-going training requirements needed for personnel in a broadband-capable PSAP. This includes but is not limited to issues such as increased stress associated with processing more information and exposure to live video from incidents, as well as maintaining proficiency with rapidly evolving technology in addition to the necessary minimum training currently needed for a professional telecommunicator. The training working group members will also evaluate current consensus-based standards and best practices and recommend improved standards and practices as deemed appropriate.

Obviously, much work lies ahead. The women and men who work in our public safety communications centers are going to see a huge change in the way they are to answer the call and manage dispatch operations, whether they're using the latest, most advanced technology, or operating on legacy systems with more limited capabilities. With Project 43, APCO will focus on ensuring that they have the information they need to continue protecting the public as technology evolves.

The success of Project 43 depends on the contributions of volunteers. The call for participants closes this Monday, March 21st, and I'd encourage any of you who are interested to respond and share this call with others. More information is available on APCO's website, at www.apcointl.org/p43, and you can also connect with any of the members of APCO's staff who are here. Thank you.