

## February 2020 Newsletter

February 2020

### How Artificial Intelligence (AI) Will Help You Understand Your Data

Governments as a whole, and public safety agencies in particular, have significantly more data available to them today than just a few years ago. Indeed, it is an almost unfathomable amount of data compared to what was available 25 years ago when paper forms ruled. As “big” as this big data is, it is about to get even bigger! A number of current trends and emerging technologies indicate yet another unprecedented growth in data. Some of the components of this surge in data include:

#### Emerging Technologies

- Body-worn cameras
- Social media
- Drones
- Fifth-generation (5G) cellular networks
- Smart cameras

#### Trends

- Internet of Things (IoT)
- Smart Cities
- Next-generation 9-1-1 (NG911)
- Public Safety Broadband Network/FirstNet

Ideally this amount of data would lead to improved, data-driven decision-making through the normal data -> Information -> insight -> decision-making process where raw data, properly collated and analyzed, is transformed into information which leads to insights on the business process that leads to enhanced decisions driving service improvements. This process is the very foundation of intelligence gathering initiatives such as CompStat and similar programs in law enforcement and other areas of government.



Historically, the majority of data received by decision-making bodies has been previously defined in one way or another. As such, this data fits nicely into traditional database structures which render it more amenable to analysis and description of relationships between various types of data. As the volume of this data has grown, new tools have been developed that can handle the volume while delivering acceptable results. There are numerous big data tools available today that do an excellent job of analyzing large data sets that traditional tools do not have the ability to effectively manage.

However, as both the amount of data and types of data continue to grow even those tools could be taxed. The growth in unstructured data – data without a format, such as text or video – in particular presents a further challenge. As we deploy next-generation 9-1-1 across the US, images, videos and voice records will become part of the 9-1-1 call for service and dispatching. As more advanced technology such as body worn cameras and videos from drones or

**Winbourne Consulting** offers a full range of public safety services, including strategic planning, systems integration, specifications development, solution acquisition, and implementation project management and quality assurance.

**Our Areas of Expertise encompass all segments of Public Safety, including:**

- PSAP Consolidation
- NG911 Strategic Planning and Implementation
- Public Safety Communications and Telephony
- Public Safety Applications and Systems Requirements and Implementation Support
- Mission Critical Facilities Design and Fit-Out
- 311 Call Centers and Implementation
- PSAP Staffing and Operations Analysis

crime scenes are deployed, those files will also become part of the public safety information domain. The resulting sets of structured and unstructured data available will present a challenge to any individual or analyst trying to discern meaning and driving service improvements.

Given this increased level of complexity, public safety will need a new approach to intelligence analysis to properly leverage these data streams that are extremely large and diverse in their makeup. Artificial Intelligence (AI) presents a potential way forward to dealing with these vast amounts of data. Indeed, as an article in the Sloan Management Review put it :

*"The convergence of big data with AI has emerged as the single most important development that is shaping the future of how firms drive business value from their data and analytics capabilities."*

Big data and AI are highly complementary to each other – big data sets enable AI to leverage its strengths in machine learning; and through its processes, AI renders complex big data understandable by discovering relationships that would have gone unseen even by today's big data tools.

For example, one of the areas where AI is making great progress is in the field of video analysis. As the amounts of both private and public video cameras have expanded, more and more of this material is being made available to public safety, often in real-time mode. While it is fairly simple to gather the recordings from a small set of cameras around an incident for review, it is quite another challenge for a human to monitor every camera feed in real-time to react to incidents *as they occur*. While the former activity can be very useful in solving a crime, the latter could conceivably stop a crime in progress. Of course, it is impossible to monitor numerous video feeds in real-time to look for indications of criminal or unusual activity – unless you're an AI tool. Through the use of machine learning and neural networks, an AI-enabled system learns what normal crowd behavior looks like at a particular location and time – for example, a train station looks different at rush hour than at 2PM. With this "knowledge", the system can then distinguish between the normal behavior of a crowd versus one where something unusual is occurring, and alert the proper authorities.

A related, though more controversial application, is running live facial recognition (LFR) on crowds. In LFR the software is assessing video streams in real time and comparing faces in the crowd against a database of known individuals. LFR has been extensively deployed in some locations in China, but has also been used to some extent in other countries, including in the US during national security events, such as the Super Bowl. The Metropolitan Police in London, i.e., "Scotland Yard", recently deployed mobile-mounted cameras running LFR in high-traffic areas<sup>ii</sup>, albeit not without controversy.



**What's Your Strategy?**

We are clearly on the verge of a new era of leveraging AI and big data to gain better business intelligence in public safety and enhancing the ability of public safety organizations to increase their effectiveness. There are numerous potential applications of AI and big data depending on the data sets that are, or will be soon, available to any public safety agency, and the use of that data will vary from jurisdiction to jurisdiction. In order to make the best use of this data, most experts recommend that an organization develop a strategy that delineates its goals and objectives based on the types of data available. Once a strategy is adopted a phased implementation period can begin. Depending on the amount and types of data to be analyzed this phase can last

from weeks to months before a program is underway in earnest. Of course, once underway, the program can be enhanced with additional data sources or analytical tools as they become available.

Agencies need to start this process today to ensure that they make the right investments in this emerging technology that will enhance their level of service delivery while avoiding dead-ends. The Winbourne Big Data team has the experience and expertise to support you in this effort. To begin the conversation, contact us at [info@winbourneconsulting.com](mailto:info@winbourneconsulting.com).

<sup>1</sup> Bean, R., *How Big Data is Empowering AI and Machine Learning at Scale*, May 8, 2017

<sup>1</sup> See <https://www.forbes.com/sites/thomasbrewster/2020/02/20/london-police-just-turned-on-facial-recognition-in-one-of-the-worlds-busiest-shopping-districts/#2ebdb0a47a47>

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## Winbourne Happenings



**Winbourne Consulting attended the Asian Development Bank seminar in Arlington, Virginia, on January 30, 2020.** The workshop discussed opportunities for enhancing infrastructure, and Information, Communications and Technology (ICT) — including cybersecurity, disaster preparedness and government/capacity building.

The Asian Development Bank (ADB) is an international development finance institution dedicated to reducing poverty in Asia and the Pacific Region through loans, grants, research and technical assistance to its member countries, as well as investments in private companies. The ADB supports projects that create economic and development impact, delivered through both public and private sector operations, advisory services and knowledge support.

**In mid-February, Lisa Madden, VP of NG911 for Winbourne Consulting, presented the Five Year Plan for Public Safety to Elko County, Nevada's Enhanced 9-1-1 Board, outlining the evolution of operational, technical, and governmental changes recommended over the next few years.** As Elko County nears completion of its NG911 system implementation, from their previous Basic 911 environment, they are looking ahead to be well-positioned to take full advantage of their public safety network and implement other operational and technology improvements, to provide the residents and first responders in the community with the best emergency service possible.



**Winbourne Consulting attended 9-1-1 Goes to Washington event in Washington DC on February 12-15th.**

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**Our Clients include city, county, state, and federal agencies located throughout the United States and the world, as well as countries in Europe, the Middle East, Asia, the Caribbean, and South America.**

## Industry Events



Every year during the second week of April, the telecommunications personnel in the public safety community, are honored.

For more information, visit: <https://www.npstw.org/>



### What is Nexus?

A first of its kind event that will immerse you in the Emergency Communications Center of the future, dealing with situations such as a mobile meth lab explosion or combined cyber/physical attack, with a focus on the communications between dispatchers and responders. From the moment a 9-1-1 call comes in, you will experience a 360-degree view of next generation emergency incident response.

For more information, visit: <https://www.apconexus.org/>



The IACP Technology Conference is a professional law enforcement event bringing together leading practitioners to explore unlimited opportunities for law enforcement to apply the latest technology to create efficient solutions to old problems and to keep pace with sophisticated cyber-enabled crimes. The 2019 conference featured 1,000 attendees, 50+ educational presentations, and 85 industry leading exhibitors.

For more information, visit: <https://www.theiacp.org/tech-conference>

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## Articles of Interest



### Real-Time Situational Awareness: Today's Holy Grail

*Written by John Contestabile*

For more information about our services and solutions, visit our website at:

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So, I have heard this expression before, but what does it really mean?

Holy Grail: something that you want very much but that is very hard to get or achieve.

Well, that seems about right, as “real-time situational awareness” or a “common operating picture” are goals that are often bandied about in public-safety and emergency-management circles. Presumably, it is something desirable in order that those in charge have an accurate understanding of what is going on around them, so that they may be prepared to respond or react. After all, how do you know you have to react, if you don’t know that something has gone awry?

To read the complete article visit: <https://urgentcomm.com/2020/02/25/real-time-situational-awareness-todays-holy-grail/>



### How To Execute a Data Strategy To Drive Better Performance

The past year has been eventful for data management in the federal government space. On Jan. 14, 2019, the OPEN Government Data Act (Title II of the Foundations for Evidence-Based Policymaking Act ) became law. Two key requirements are that the “all non-sensitive government data be made available in machine-readable formats by default” and that “head of each agency shall designate a nonpolitical appointee employee in the agency as the Chief Data Officer.” Then on June 4, an Office of Management and Budget memorandum established a Federal Data Strategy framework to “enable Government to fully leverage data as a strategic asset.”

To read the full article visit: <https://gcn.com/articles/2020/02/25/executing-data-strategy.aspx>



### FirstNet Covers 2.61M Square Miles, Counts 1.2M Connections

The First Responder Network Authority (FirstNet) nationwide public-safety Long Term Evolution (LTE) network now covers more than 2.61 million square miles of the nation, said AT&T, the contractor deploying the network. More than 11,000 public-safety agencies and organizations subscribe to FirstNet, accounting for more than 1.2 million connections nationwide.

In 2019, AT&T said it added 120,000 square miles of coverage. An infographic said the carrier had more than 75% of band 14 coverage completed, along with more than 700 markets with band 14 spectrum. The carrier needs 60% band 14 coverage to meet a March deadline and receive the next milestone payment from FirstNet. A January Government Accountability Office (GAO) report said AT&T is also on track to meet its first adoption milestone by its end-March deadline, although no specific figures were cited.

The full article can be viewed at: <https://www.rrmediagroup.com/News/NewsDetails/NewsID/19317>



### In a New Data Decade, Constituent Experience Reigns

Look us up on LinkedIn

<https://www.linkedin.com/company/winbourne-consulting-llc?trk=biz-companies-cym>



Over the years, humans have predicted fantastical feats would be achieved by 2020, from robot servants to public space travel. Now that 2020 is here, some of the accomplishments are different—but still grand. In the decade ahead, transformational technologies that better meet constituent needs will define the missions of local government leaders. Advancements in 5G, artificial intelligence (AI), the Internet of Things (IoT) and multi-cloud operations will expand community experiences and digital government possibilities.

It's a new era for data: a time to catalyze streamlined IT, flexible consumption and operations, multi-cloud options and an evolution of the network edge. Sustainable innovation and modernization will bolster how we live, work and play. As CIOs and IT leaders prepare their departments for new ways to serve their constituents, here are the biggest technology changes that are impacting them—and important considerations for each.

To read the full article visit:

<https://www.americacityandcounty.com/2020/02/25/in-a-new-data-decade-constituent-experience-reigns/>

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**We Are Interested in Your Thoughts on the Above Topics.  
To share them with us, please:**

**Email us at: [info@w-llc.com](mailto:info@w-llc.com)**

**Or**

**Twitter us at <https://twitter.com/winbourne11c>**

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