



Transform Your Public Safety Agency with Analytics

How leveraging data can help you achieve operational excellence

Chapter 1

Data – what’s the big deal?

In today’s world, we hear about data and analytics constantly. Just consider all the ways we analyze data daily. From using digital devices to tracking steps to searching the web, data is now part of our everyday life. So, how can it be used to transform public safety agencies and create safer cities?

Simply put, data analysis empowers agency leaders to make evidence-based decisions, which benefits their agency and the public. The insight it provides serves as the foundation for safer communities by

enabling leaders to transform their operations from reactive to proactive.

Much like a business, a public safety agency can leverage data and analytics to improve all parts of its operation. From the moment a call-taker answers a call in a PSAP to a first responder’s final report, there are dozens of processes you can measure and improve.

Analytics can help you:



Better understand your operation



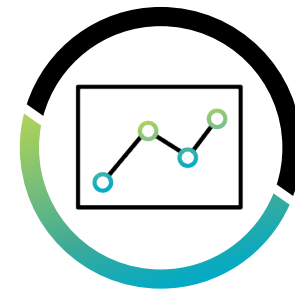
Increase agencywide collaboration



Improve efficiency



Empower decision-making



Identify positive & negative trends



Improve service

How analytics can lead to **transformative change**

Monitor operations & workloads

Tracking call volumes, operator activity, and officers' patrol logs can help supervisors create workforce plans that optimize efficiency and coverage while taking call-taker and officer well-being into account.

Examine & improve performance

Agencies can improve performance through careful monitoring of processes. You can compare an employee's performance over a specified range – such as call-takers' processing times, responders' arrival times, and total service time – to user-specified data or against industry standards to determine efficiency.

Allocate resources

Using data can ensure resources match the scale of the required response. For example, you can use data to determine how many units were dispatched to a call, where and when the call occurred, and time of service. Similarly, you can compare call volumes against PSAP staffing. This information can determine if your agency has appropriate resources and if you're deploying those resources effectively.

Support governance & oversight

Leveraging data can create honest, transparent answers to questions about an operation's processes and goals. Because public safety agencies are on the front line of any community, they are expected to adhere to local, state, and federal standards.

Inform & engage stakeholders

Disseminating data to a wider audience builds understanding, trust, and confidence. This results in improved relationships between an agency and every segment of a city. You can also use data when seeking increases in public funding. For example, a 24% spike in the number of traffic fatalities in Alabama, USA, led officials to allocate \$1.8 million in public funding toward data collection and software development in an effort to curb deaths¹.

¹[Statescoop.com](#), "To prevent traffic fatalities, Alabama invests \$1.8 million in data science," August 10, 2017



Chapter 2

Culture Change

To unlock the transformative power of analytics within your agency, you must first adopt a data culture. A data culture allows you to take advantage of evidence-based insights to optimize all areas of operation, from strategic planning to incident response.

A data culture requires buy-in from leadership and agencywide accessibility. The former ensures leaders are willing to leverage data for operational improvement, while the latter encourages innovative solutions to organizational challenges.

When agency personnel can easily access job-specific data, it becomes so much more than just numbers. It becomes a tool of empowerment, motivating all personnel to set new benchmarks of efficiency and performance.

For example, agencies can use data and analytics as a motivating factor for call-takers. PSAP environments where wallboards display data can foster an environment of friendly competition and camaraderie for call-takers who attempt to out-perform their peers. The same data also helps supervisors protect well-being and increase efficiency by balancing workloads.

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Chapter 3

Where to begin?

Now that you know a little more about how analytics can benefit public safety agencies, it's time to put plans into motion.

Here are five easy steps to get you started.

1. Determine the strategy

Most leaders know what areas of their agency need to improve, but they can leverage analytics to develop strategies and determine desired outcomes. For example, data can shed light on all parts of a call for service, from time to answer to response. If your strategy is to reduce those times, data analysis can provide historic and real-time insights as you establish new goals.

2. Outline the tactics

Once you've established your strategies, how will you capture and use the data? Who will have the power to access it and how? Interactive dashboards, for example, can be set up to give immediate access to the most relevant information, while enabling drill-down to detail if needed.

3. Monitor the data

Running analytics is a worthless endeavor if they aren't monitored on a regular basis. Establishing a performance baseline is essential, but so are frequent checkups.

4. Continually measure

You should determine how you plan to measure key performance indicators (KPIs) and when to establish new benchmarks. If you treat data measurement as a continuous process, you'll have ample opportunities to proactively optimize operations while discovering new insights.

5. Learn from the feedback

Health-tracking analytics offer a source of continuous feedback from which you can base informed decisions. Similarly, feedback loops evaluate progress toward reaching or exceeding standards and provide a roadmap to achieving those goals. Simply put, they show you where you can change actions and behaviors to improve performance and create greater efficiency.

Once your plans are set in motion, you'll naturally want to study the outcomes to determine if your efforts are paying off. **Real-time and historic reports** represent the true measure of success when it comes to process improvement. Turn the page to explore the types of reports you can implement to ensure you meet your goals.



Chapter 4

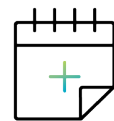
Reporting formats & frequency

Depending on where improvements are needed, a report can illuminate virtually any part of an operation. You can generate reports using your agency's sources of truth – CAD and RMS data. **Here's a look at what types of reports are available, and what they measure.**



Real-time reporting

Real-time access to dispatch and records data gives leaders and personnel the flexibility to make spur-of-the-moment adjustments as needed. Geospatial and playback reports can provide a new level of insights and give responders the ability to plot location-based information. Live reporting can also provide information on call volumes, available units, and response times.



Forecasting

Looking ahead to determine how your agency may respond to future challenges can help you prepare now. For example, a heat map report indicates the frequency of calls or response to a certain part of a community, which may inform future resource allocations. Patterns in the number of calls during certain times of day, week, and year can help leaders optimize future staffing plans.



Historic reporting

Historic reports offer a unique view into how processes have either improved or declined based on prior trends. You can drill down deeper on specific events, from location and priority to how the event was handled. They can even be used as a crimefighting tool.



SPOTLIGHT

Analytics in action

The Santa Clara, California, Police Department used reporting to monitor vehicle burglaries and vandalisms. Recognizing not all calls for service translate to a crime report, the city's crime analyst began tracking reported events through the department's CAD system. When a new incident was reported, a new CAD event was created.

Call data provided an accurate number of incidents, while historical location data highlighted problem areas daily. And because CAD data can be used for real-time crime analysis, the analyst received a description of the suspect and suspect vehicle as the incident was reported.

The combination of real-time and historical analysis not only allowed information to be sent out to patrol officers moments after the incident, but it also helped the department deploy resources accordingly.

Because the data suggested specific patterns, the department could patrol certain parts of the city with greater intensity, leading to a decrease in incidents.

Chapter 5

The tools you need

Leveraging data and analytics might seem like reinventing the wheel for some. And the last thing an organization needs is a complex system adding stress to an already overburdened staff.

The most beneficial analytics solution is one that's easily deployable and provides continuous access to agency personnel who need it, when they need it. That access can also ensure worker well-being and reduce stress if data is provided agencywide, as opposed to being available to a handful of employees who are responsible for running reports.

Here are the tools your agency needs to start leveraging data and analytics the right way.



Integration with CAD & RMS

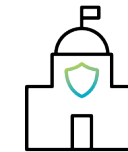
Hardware and server requirements will vary from agency to agency, but analytics solutions can be easily integrated with an existing CAD and RMS and/or third-party systems. A robust data warehouse, a vital part of an analytics solution, pulls data from those systems to provide a single source of truth.



Cloud deployment

There are misconceptions surrounding the speed, resiliency, and cost of the cloud, but it offers secure web-based and mobile reporting to responders agencywide. Organizations not quite ready for the cloud can choose a hybrid approach where CAD and RMS systems operate on-premises, and the analytics solution operates in the cloud.

In terms of reliability, consider a recent survey from [Uptime Institute²](#) that found nearly one-third of traditional responding data centers had experienced an outage due to on-site power losses. Even if an agency loses power, cloud data is still available. And because cloud storage is virtually infinite, agencies can scale up as necessary.



On-premises deployment

For agencies not ready to make the move to the cloud, an on-premises deployment is also an option. On-premises servers have data limitations, however, and growth requires continual investment. But it allows IT staff to have full control of the systems and perform upgrades in-house.

Conclusion

If you still need convincing about the absolute truth of data analysis, think of it as the process of measuring all parts of a task, from start to finish. The result might not change how a task is performed, but accurate analysis can show if adjustments are necessary and when, where, why, or how to make them.

Data can unlock a world of infinite improvement for public safety agencies everywhere. Adopting a data culture isn't just about positive, short-term gains, but rather a long-term transformative impact. If an agency is willing to unlock the full power of analytics, the benefits are numerous. Evidence-based data insights can lead to decreased costs, improved efficiency, increased employee engagement, and greater public transparency.

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