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# Transformers: Managers Transform Dispatch Centers into Performance Management Tools



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With everyone under pressure to deliver the same or more services with less, local government managers are asking: How efficiently are services being provided to citizens? What are the costs and benefits of these services? How effectively does the service level meet residents' needs? Time-data sets can help local governments answer these questions and effectively manage modern public safety agencies. Time-data sets can be tracked for such things as average time spent on calls by type, response times to incidents that require rapid arrival, percentage of an officer's time uncommitted to calls for service workload, and more. Unfortunately, far too few police and fire departments are capable of routinely receiving this information, and even fewer regularly review the data and make operational adjustments based on the reports.

Across the spectrum of services, managers are tearing up conventional answers and redefining the bottom line. By transforming its public safety dispatch operation—moving beyond its basic functions to incorporate data collection, analysis, and measurement—a community will see both improved performance and better managed operating costs.

## Building Blocks of Next-Generation Systems – Back to Basics

This article describes a process developed by ICMA Consulting Services that local governments can use to begin transforming their 911 dispatch centers. The concept, while basic in nature, is being presented because so many communities focus on building elaborate dispatch centers without first focusing on the fundamentals or core building blocks. As a result, resources are expended in an effort to make up for inefficiencies.



The village of Glenview, Illinois, also shares its success story—especially in the data collection area. Although most public safety agencies are collecting mountains of data as part of the emergency services dispatch system, the reports generated by a computer-assisted dispatch (CAD) system are often erroneous because of computer codes that fail to cleanse the data and provide meaningful information.

ICMA is sometimes asked to conduct an operations analysis of a jurisdiction's public safety services deployment and workload only to learn that data are being collected improperly, mislabeled, scattered among various systems, or are completely inaccessible. Data collection is handled in a variety of ways: off-the-shelf, sophisticated computer-aided dispatch and record management systems; software specifically tailored by external firms to a local government's needs; and paper trails and hand-written logs in communities unable to justify the costs of upgrades.

But for the most part, these stacks of magnetic tape, rooms full of data collected, and archived paper logs are not being used as intended—as a reference during a decision-making process with the intended outcome of providing faster service at lower cost while not compromising delivery and quality.

## **Training of Personnel**

Training is the most important element in ensuring that all activities are recorded exactly the same, each and every time, by all personnel. Extracting meaningful information is extremely difficult when there is no internal consistency of records. Limited-choice, drop-down menus can go a long way to forcing consistency, but rigorous training and supervision are required so that all staff are familiar with not only the "how" but the "why" of data collection.

## **Key Indicators – Core Competencies**

Managers must establish a set of measurements to serve as early warning signals of problems. Local governments must establish key indicators up front that are critical to outcomes and service delivery. Use benchmarks that have been developed by national bodies like the National Fire Protection Association, Association of Public Safety Communication Officials, and Commission on Accreditation of Law Enforcement Agencies when designing initial systems.

Communities can then evaluate the service they provide by comparing times to process the initial information, but only if it is being measured. Measuring depends on recording the time, and this is the key task that is most often overlooked in designing and operating the communications center.

## **Stakeholders**

Operating the communications center as a management tool requires the commitment not only of dispatchers but also of the field force. Patrol personnel must be required to maintain the same level of consistency in handling calls as the dispatchers and be held accountable for correcting

erroneous information—advising the dispatcher that the call should be recorded as a larceny and not a burglary, for example.

Beyond just receiving information, the communications center records the time to task operations of local government services. These time stamps are critical when evaluating the performances of personnel throughout the locality and are another reason stakeholders need to be identified and accountable. When residents do not receive a timely response to their requests for service, administrators must determine what, if anything, went wrong in the process. These time periods may indicate issues with appropriate staffing levels during specific periods of the day as well as the supervision of deployed personnel.

The stakeholders do not exist just within the organization but must include the customers—the citizens and businesses in the community. Systems can be magnificently designed but if they do not service the stakeholders across the service spectrum, satisfaction in the performance will likely not be achieved.

## **Software and Hardware**

Plenty of vendors offer incredibly sophisticated CAD systems. Our message to managers is a loud "Caveat emptor!" Far too many communities have purchased expensive systems only to quickly learn that the package did not come with all the modules and add-ons required to produce meaningful reports. Alternatively, public safety agencies often create financial and operational nightmares by insisting that the systems be customized to meet their specific operations.

Local government officials need to be careful and deliberate when they adopt new software. Software can be highly dependent on maintenance from a skilled on-site information technology (IT) staff or it can be maintained remotely, and both options require budgets. It can also require specific hardware configuration or it can be designed to operate with multiple forms as well as lower-cost equipment.

Many of today's software vendors can design anything that a customer desires. The questions to ask are: At what cost and are all the applications necessary? An option to consider is implementing applications over time on a build-out basis that allows staff to be trained and systems upgraded to achieve the maximum operations afforded by the system.

Hardware has a short-lived depreciation cycle. The communications center operates around the clock. The equipment is used by many different people and cannot be shut down. The jurisdiction should plan a three- to five-year cycle for refreshing the hardware in the communications center. To minimize potential conflicts, the center should upgrade only after consulting the software application support staff.

The center should avoid software that uses specific hardware in order to avoid being limited in getting competitive bids when upgrading or replacing pieces of the system. Software—in particular, software that uses applications such as geographic information system technology—should be designed around standard operating protocols.

Imagine if your responders had access to what was happening at a location in your community in real time so decisions could be made prior to arrival and resources could be more properly dispatched. Imagine if false alarms could be confirmed before multiple resources were deployed. What cost savings could your community enjoy?

Today, many communities have cameras producing streaming video focused on roadways, high-crime areas, and critical infrastructure. Plus, businesses have cameras focused on their facilities for security purposes. Hospitals have systems that report the status of emergency rooms and availability of beds. Water and sewer systems are constantly transmitting pressures, volumes, and flows.

Your communications center ultimately will need to receive, process, and share this information. Your jurisdiction needs to factor in new forms of data collection as well as existing practices.

Extracting and analyzing the data require an equal amount of discipline. Processing times must be evaluated frequently and regularly. The center should run exception reports, showing unacceptably long response times to emergencies, and then identify what went wrong on those calls.

These reviews must occur frequently or the players forget the specifics of the incident and the opportunity to adjust the system is lost. The best-designed and best-equipped center is useless if information cannot be received, processed, and transmitted to the appropriate disciplines within established timelines.

The analysis should begin with measuring the length of time it takes the communications center to answer the phones, process calls, and alert responders, whether they be departments of public works, police, fire, or EMS. Communications centers should measure their times to task, and when those times fall outside the established benchmarks, administrators need to determine why and correct the problems.

## **Making Data-Driven Decisions**

Receiving the initial information should not be viewed as the only function of the communications center. Recording what happens to the information after it is received is just as important and critical to evaluating services. If it is not possible to measure the various time elements, beginning with the initial input to the last employee leaving the scene, it is also not possible to determine whether the service being provided can be improved.

Evaluating how long it takes to perform requires that key points be recorded. It also requires the ability to easily and regularly extract these time stamps for review by administrators and compare performance with other agencies providing the same service.

Local governments need systems that can automatically populate reports so that outside consultants do not have to perform quantitative assessments. The more cumbersome it is to extract information and read it, the less likely localities are to review performance.

Access to current, real-time information allows managers to make decisions based on facts, not on collective knowledge or feelings that too often guide decision making. Deploying the right resources at the right location at the right time requires data that can be analyzed in order to support critical decisions.

## **Village of Glenview — Building Blocks in Action**

In 2006 and 2007, the village of Glenview, Illinois, began a complex consolidation of its police and fire dispatch operations to improve service and generate efficiencies. As part of this consolidation, police and fire dispatchers were cross-trained to service both types of calls. The village also upgraded its CAD system, police and fire records management system (RMS) databases, and police and fire mobile computing.

Glenview's goal was to provide both the police and fire departments with modern communications and improved data management capabilities. It also wanted to develop performance measurement tools. Prior to consolidation, the police and fire departments had acquired separate systems for CAD-RMS that did not allow for intercommunication and data sharing. Now, both departments benefit from service call data collection, better time management, and response reporting tools.

Village dispatch operations, which once had 22 full-time employees, are now run more effectively with 15 cross-trained, full-time employees. Glenview public safety dispatch now has a reputation that has attracted other communities in the region interested in partnering. A first agreement has been signed with the police department of Grayslake, Illinois, to provide comprehensive police dispatching service.

This agreement will provide Grayslake with significantly improved and more reliable service. Glenview will benefit from a \$225,000 reduced general fund transfer to the 911 dispatch fund for years 2010 through 2016, further reducing the net costs of Glenview's operations.

## **Status Report for Glenview**

Glenview is well into the eight building blocks needed for a next-generation communication system. Here's an update:

**Collecting data.** Using new technology that automatically captures results, Glenview's public safety dispatch is measuring itself with standards for service, including answering non-911 calls within two rings and 911 calls on the first ring. Such high-priority calls as ambulance calls are measured against the standard of dispatch within one minute of receiving the call. Glenview dispatch can also capture valuable data related to police and fire time use and service call completion statistics.

**Extracting data.** The new CAD-RMS system offers many standard reports and the ability to build custom time usage reports that assist the public safety teams in understanding where and

how shift time is spent. Glenview's next step will be to integrate these reports with village financials to quantify the cost of the services provided.

**Analyzing data.** Glenview is working with its police and fire departments to craft monthly reports that can be used by command staffs to analyze personnel time allocated versus time used for key service priorities. The departments are beginning to analyze spent service call time versus noncommitted time to assess what quantifiable results the village is receiving for its resource investment in its public safety personnel.

**Integrating data.** The village is making progress toward developing integrated technology systems, embedding the use of management reporting into municipal business operations, and creating an organizational culture that emphasizes measured performance. Since 2006, the village has undertaken a phased rollout of new enterprise resource planning software to replace legacy systems, department by department. Within the next year, all departments will have the ability to determine the true cost of services by tying projects and performance data to the village's financial systems.

The ongoing objective is to show both the village board and the business units the value of what is measured. Documented performance results are critical to the sustainability of the village and the services that are provided.

## **Leveraging Data Collection through Regional Partnerships**

Economies of scale allow many of the goals outlined above to be fast-tracked by partnering with other agencies. Today's dispatch equipment and technology systems are often capable of providing service to multiple agencies (which do not need to be contiguous), whereas single-agency centers most commonly purchase and use the necessary equipment for only their facility.

In February 2009, Glenview entered into an intergovernmental agreement to provide police dispatch services with the village of Grayslake, Illinois, located approximately 25 miles away. Dispatching services will switch to Glenview in October 2009. This is a good fit because both local governments already used the same CAD and RMS software, and it will allow Glenview to provide dispatch services and to share data through the RMS system.

The partnership has brought with it these benefits:

- **The ability to leverage costs and benefits from more sophisticated technological tools.** Several agencies can share the cost burden on the center and, ultimately, the tax burden on citizens. Consolidated centers also can better afford quality IT assistance to manage the technical side of CAD and RMS applications. Glenview has privatized all IT operations and has the flexibility to add or subtract IT services incrementally as needs change.
- **Easier compliance with federal mandates.** Intergovernmental agreements help communities afford the cost of Federal Communication Commission mandates regarding radio antennas.

- **Information sharing.** Grayslake, for example, maintains an excellent "time buckets" program to capture and analyze nearly every minute of police officer time. Officers regularly interface with CAD on a dispatch call or through their mobile computing system to report activities; this provides a detailed account of the department's resource use.
- **Improving access to information and response time.** Local governments can revisit the nuts and bolts of the service level they are receiving. Grayslake is partnering with Glenview to upgrade its radio channel, which will allow it to have its own narrow-banded radio frequency instead of sharing an existing frequency with a variety of agencies. This will improve the speed of officer access to dispatch. Grayslake's fresh look at its service model facilitated this solution.

## Lessons Learned from Glenview

Although a work in progress, Glenview's experience has shown that the long-term perspective of service delivery reengineering and strategic technology investment can pay off—not just in reduced costs but also in efficient collection of performance management information for police and fire services.

Working together, police, fire, and 911 dispatch teams help each other improve accountability and service provision. Today's challenge is to develop systems and processes that allow for efficient collection of time use and service program costing. These are often not high enough priorities for police and fire.

It has traditionally not been part of the public safety business process to collect and analyze data in this way in order to assist with resource allocation and goal setting. Now is the time, when budgets are tighter than ever before, to integrate these management practices into the expectations for police and fire departments.

A key lesson also learned is that local governments can succeed at delivering cost-effective, win-win results for citizens by trusting each other enough to share resources and take educated risks with the goal of maintaining or improving service levels.

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