

The Value Of Data For Fire-Fighting And Firefighters' Safety

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The power of data provides numerous benefits to the fire service, and today's data collection and analysis software tools are making data more valuable than ever. Data collection and records management have been a core requirement in the U.S. fire service since the Federal Fire Prevention and Control Act of 1974 established a necessity for state and local governments to develop fire reporting and analysis capabilities.

The National Fire Information Reporting System (NFIRS) requirements cover incident and casualty reporting, and later versions of the NFIRS format (NFPA Standard 901) have expanded the collection of data beyond fires to include a full range of fire department activity on a

national scale. All 50 states and the District of Columbia report NFIRS data, which together represent the world's largest national, annual database of fire incident information.

Benefit The Operation Of Fire Department

“ Effective collection and analysis of data can help fire departments document their performance to various stakeholders

And the benefits of data collection at today's fire departments also extend beyond the ability to meet NFIRS requirements. Collecting and analyzing data from department training records, building and inspection information, document management, and apparatus and equipment maintenance and tracking, among other categories, are additional aspects of data collection that can benefit the operation of a fire department.

A variety of commercial data collection software products help to streamline data management in today's fire service, including suppliers such as Firehouse by ESO, ImageTrend, ZOLL and Emergency Reporting. In particular, effective collection and analysis of data can help fire departments document their performance to various stakeholders, make a stronger case when applying for grants and/or additional funding, and understand strategically how their department can improve.

Demonstrating Fire Department's Effectiveness

"Data is driving the fire service, but humans are in the driver's seat," says Tom Louis, Business Development Analyst for Emergency Reporting. "Humans must extract data, compile it and communicate it in an effective manner to demonstrate a department's effectiveness in serving the community."

More sophisticated management of incident reporting and other data can support departmental requests for grant money and other funding. *"Most departments are looking for sources of funding, and they know the firefighter grants are out there, so they need to up their game,"* says Louis. *"Data collection can bring value locally to meet a department's need to demonstrate its effectiveness to the community."*

"In the fire service, decisions cannot be made on emotion alone, and people are grateful for [data management systems] we provide," he adds. *"Taxpayers require a level of transparency in order to hold those managing the services of a community accountable, to justify and verify the essential reason for their existence."*

Promoting Firefighters' Health And Safety



Capturing data points can also serve as a means to analyze the situation and prevent injuries from happening

Another benefit of data collection is to promote the safety of firefighters. For example, data collection can enable a department to track firefighters' exposure to carcinogens, hazardous

materials, blood-borne pathogens, and/or “atypically stressful events.” If there is an injury or illness, data documentation can help to demonstrate a firefighter’s qualification for injury benefits or medical care, document any personal protective equipment (PPE) failures, etc. Capturing data points can also serve as a means to analyze the situation and prevent injuries from happening.

Louis says records management systems can provide a return on investment (ROI) within a year or less based on the ability to identify areas in a department that need improvement. Better data guides more efficient deployment of manpower and application of resources. Data can also document compliance with national standards to achieve accreditation with the Center for Public Safety Excellence (CPSE), for example. Considering the high cost of equipment and other fire service expenses, the cost of good data management software is “*small potatoes*,” says Louis, especially considering the benefits.

Cloud-Based Data Collection System

Emergency Reporting provides a 100% cloud-based system to collect and report fire service data, and annual subscription costs vary depending on which modules are purchased and on the size of a department (number of fire stations). A starter NFIRS-only package starts at under \$1,000 a year. Other software companies provide a range of products including both cloud and/or systems installed on-premise. Simplicity of use is one point of differentiation among various products.



Data reporting software from companies such as Emergency Reporting is a powerful management tool in the fire service

Before the advent and growing popularity of specialized data reporting software systems, fire

departments typically used laborious 'pen and paper' reporting techniques, or they used 'home-grown' computer systems designed using Microsoft Excel spreadsheets and/or Access databases, for example.

The next wave of data management systems is providing more robust business intelligence services, including real-time data in the form of dashboards that enable insight into the state of a department at a glance. Application software protocols (APIs) are enabling integration of data systems with scheduling software, response software and other solutions.

Data For Fleet Management Systems

“ If you make data easy to use, then decision-makers can extract data that is trustworthy and easily understood”

In the age of the Internet of Things (IoT), there will be more integration with devices such as heart monitors or apparatus systems that can provide data for fleet management and maintenance systems. *“The data environment will get denser, and the ability to sift through it and pull out useful information will be more of a challenge,”* comments Louis.

“Beyond compliance, probably the biggest benefit of better data collection is the ability to extract data out of the system to make intelligent, actional decisions,” says Louis. *“If you make data easy to use, then decision-makers can extract data that is trustworthy and easily understood!”*

"It allows you to take an introspective look into the performance of your department, using data that measures what you do day-to-day, incident-to-incident," he adds. "Measure it and you can tell your story of what you're contributing to your community."

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