

Mass Notification Practices in U.S. Local Government

Findings From a Comprehensive
Study of Notification Practices Across America

Presented by:



Funded by:



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MASS NOTIFICATION PRACTICES IN U.S. LOCAL GOVERNMENT

SELECTED FINDINGS FROM A COMPREHENSIVE STUDY OF MNS IN AMERICA

INTRODUCTION

Few topics in the public safety arena have received as much attention over the past decade as emergency or “mass” notification. Adoption of the tools and technologies associated with mass notification systems (MNS)¹ is widespread, and many options and deployment models are currently available to public safety managers in state and local government.

Yet, to date there has been only a vague and anecdotal understanding of how local governments and public safety agencies across the U.S. evaluate, select and use this valuable technology. Unresolved questions include:

- How widespread is the adoption of mass notification systems by local governments?
- What types of municipalities have deployed such systems, and which departments use them most?
- How frequently do they use them, and for what purposes?
- Which purchase model do local governments prefer? (subscription or on-premise)
- What are the drivers of customer satisfaction that public sector clients should consider when evaluating MNS vendors?

This white paper, distilled from a larger quantitative study, seeks to answer these and other related questions. Our hope is emergency managers and local officials from all walks of life will benefit from a better understanding of how emergency notification is being implemented across the nation, improving their own plans and programs in the process.

THE STUDY

Funded by Blackboard Connect Inc., Galain Solutions, Inc. developed a comprehensive survey instrument and fielded a telephone survey from November 2009 through January 2010.

Professional telephone researchers were deployed, reaching out to mass notification decision-makers across the country.



¹ These systems are also frequently referred to as “emergency notification systems” or “ENS.”

415 surveys were completed by individuals with job titles such as: Emergency Management Director, Emergency Management Coordinator, Communications Supervisor/Officer, Assistant Police/Fire Chief, and 9-1-1 Manager. The sample size is sufficient to draw conclusions on a national level, providing a margin of error of just over 5 percent. Municipalities of all sizes were targeted (though cities with less than 1000 in population were excluded). Though not all results are presented here for proprietary reasons, a number of important findings can be gleaned from this groundbreaking research.

KEY FINDINGS

EMERGENCY NOTIFICATION HAS GROWN FROM A “NICE-TO-HAVE” TECHNOLOGY INTO A CRITICAL PUBLIC SAFETY TOOL.

ADOPTION OF EMERGENCY NOTIFICATION

Emergency notification technology, in some form, has existed since the late 1980s. Prior to September 11, 2001, vendors were few, software applications were specialized, and market adoption was minimal. In the decade since, the number of vendors and solutions has expanded dramatically as a heightened focus on homeland security and injections of funding for public safety technology have fueled demand.

Today, based on survey results across municipalities of all sizes, just over 50 percent of respondents said they currently manage or have access to a telephone-based mass notification system. (see Figure 1.). Roughly the same percent said they have access to a system that will deliver email or SMS (text message) to citizens.

(Interestingly, just over 25 percent said they use a different system for emailing or texting citizens than they do for telephoning them, indicating multiple, independent systems are being managed together for a significant percentage of the market.)

In general, the likelihood that a municipality has deployed a notification system increases with its population size. In fact, over 75 percent of cities with more than 150,000 in population currently utilize a mass notification system.

Figure 1

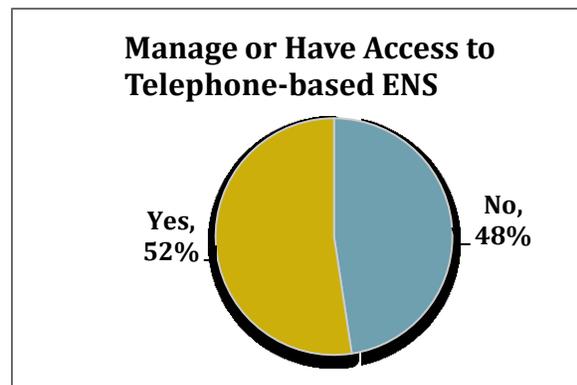
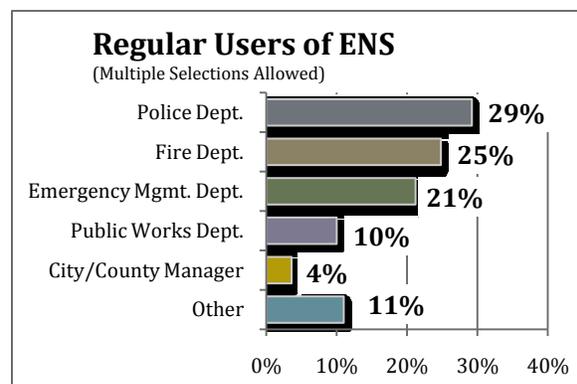


Figure 2



FREQUENCY OF USE

Who is the typical MNS user at city hall? In our survey, police departments were most frequently-cited as regular users (29 percent). (See Figure 2.) This was followed closely by fire departments and emergency management agencies (25 percent and 21 percent respectively). Less-frequent users include city managers, or municipal utility employees.

How often do municipalities use their MNS platforms?

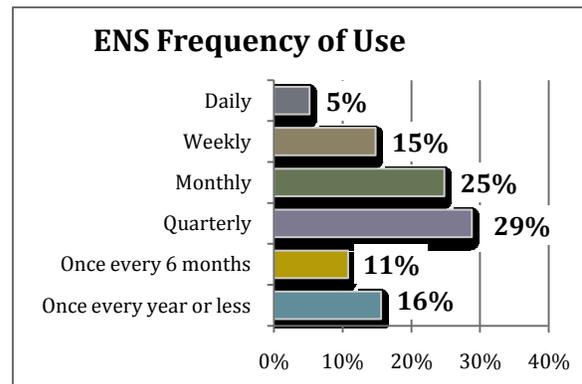
In this study, the most typical rate of occurrence is “quarterly,” followed closely by “monthly.” (See Figure 3.) 15 percent of the market utilizes their systems weekly while 5 percent say they use it daily. As one might expect, the larger a municipality is in population size, the higher its frequency of system usage.

These statistics show a dynamic and robust public safety environment where emergency notification is a common tool used with regularity.

While the study itself is not longitudinal in nature (examining data as it changes over time), we believe past experience and the survey results tell a story of growing importance for notification systems at the local government and public safety level.

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Figure 3



THE MANNER IN WHICH SYSTEMS ARE DEPLOYED AND UTILIZED IS CHANGING AS TECHNOLOGY CHANGES.

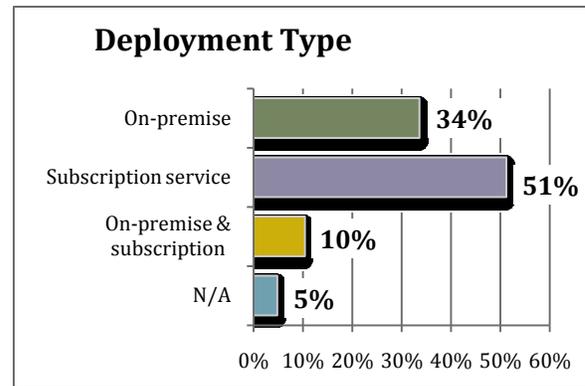
ON-PREMISE VERSUS SUBSCRIPTION SERVICES

It was only a few years ago that the vast majority of notification systems licensed or sold in the U.S. were stand-alone computer servers, installed in operations centers, and maintained by local staff members. These systems generally used a relatively small number of dedicated telephone lines, offering no ability to expand without incurring significant additional telephony expense. Funding rules prohibited any other deployment option as grant requirements generally stipulated funds could only be used for capital purchases—not for subscriptions or leases.

While some agencies still prefer dedicated, on-premise hardware, and certain funding barriers still exist, the trend over the past few years is clearly toward a hosted, subscriber-based Software-as-a-Service (SaaS) model.

Currently, based on the results of our survey, 51 percent of municipalities utilize an Internet-based service to which they subscribe, compared to 34 percent with on-premise hardware systems. (See Figure 4.) 10 percent use hybrid solutions (both on- and off-premise). 5 percent use N/A.

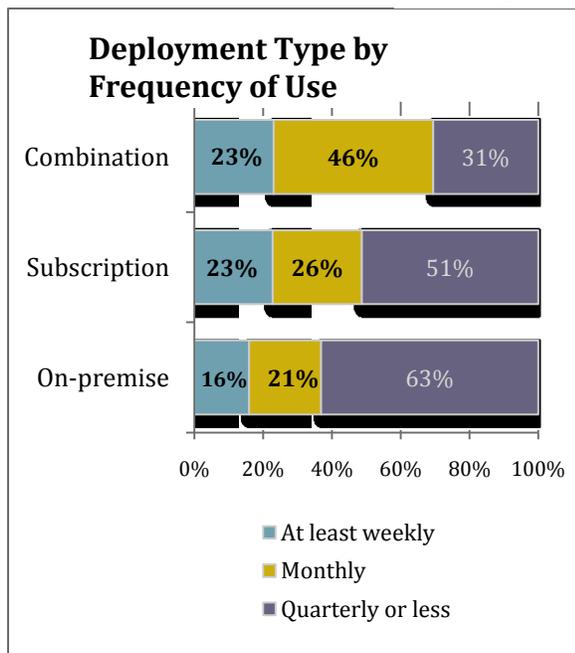
Figure 4



Interestingly, respondents with on-premise hardware use their systems with less frequency than those who subscribe to a service, or have a hybrid solution. 37 percent of on-premise users deploy their systems at least monthly, compared to 49 percent of those who subscribe to an internet-based service. (See Figure 5.) 69 percent of those with a combination/hybrid system use it at least monthly.

We believe subscription-based services are used more frequently for two reasons. First, subscription services typically offer a greater number of telephone lines, opening more possible usage situations than those appropriate for the limited number of lines available to on-premise only system.

Figure 5



While some might argue the opposite is true since on-premise systems do not pay “per call,” we’ve found most subscription vendors provide either a contracted pool of minutes or unlimited calling, making per-call fees less of an inhibitor to usage.

Second, our research showed larger municipalities are more likely to utilize a subscription-based service. As there are simply more incidents associated with a densely populated area, the usage will naturally be greater. Further, greater population density typically means larger-scale notifications will be required—a situation generally better suited to a subscription service given their access to a large number of telephone lines.

EMERGENCY VERSUS NON-EMERGENCY USE

In the market today, there appears to be an ongoing debate regarding the appropriate set of circumstances for launching a public notification. Should notification systems only be used in absolute emergencies, or should they be used for routine, non-critical communications as well?

To explore this issue, respondents to the ENS decision maker survey were asked to indicate if they use their system for:

- Emergency situations only (e.g. life or health threatening situations)
- Urgent situations (e.g. planned residential electricity disruption)
- Everyday, non-emergency situations (e.g. street closures, trash pickup changes)
- Emergency, urgent, and non-emergency situations equally

Two camps emerged from the research with regards to situations for which emergency notification systems are typically used.

Two camps emerged from the research with regards to situations for which emergency notification systems are typically used. Almost sixty percent said they use their system in “emergency situations” only, while 42 percent said they use it in emergency, urgent and non-emergency situations equally. (See Figure 6.)

One key factor for this is cost. Public sector users having vendor contracts with a per-message pricing model are likely to exclude all but the most serious use cases, whereas vendors with unlimited or near-unlimited messaging models are more likely to adopt alternate uses.

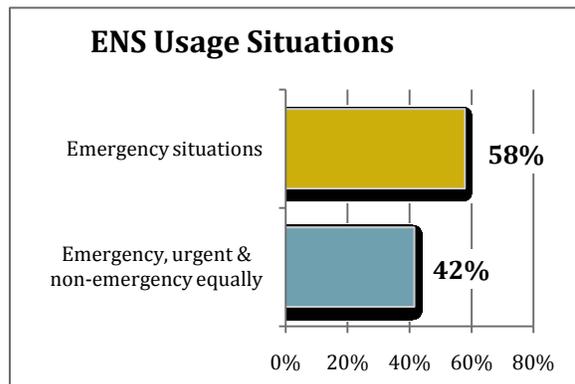
From our experience, however, part of the difference between these two camps appears to be philosophical as well. Some public safety managers worry that using the system in anything other than dire circumstances could lead to public apathy or irritation from overuse.

Others take a position that greater citizen-system interaction actually leads to higher comfort levels and better compliance with notification instructions. This camp feels the system is a valuable, everyday tool for communicating with the public.

Data usage also comes into play. In some situations, public safety managers are limited by statute on how E911 data (the address and location data used by 9-1-1) can be used. Interpretation of these laws can often be murky: many managers prefer to not take the risk of overstepping bounds by using “emergency only” data for non-emergency purposes.

Whether considering the change from on-premise systems to subscription-based services, or the rise of systems being used for non-emergency purposes, clearly the way systems are used

Figure 6



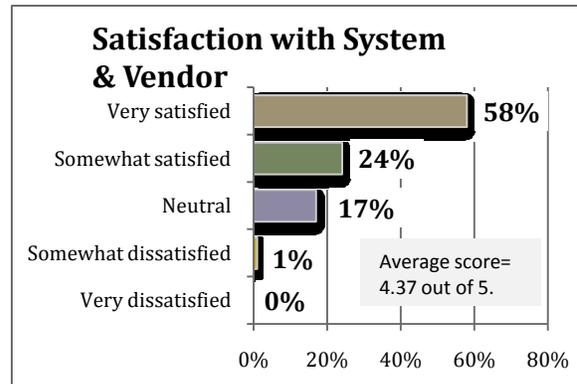
and deployed is changing as technology and communications trends transform. These changes raise additional questions regarding system and vendor satisfaction levels, and the identification of key drivers of overall satisfaction. Also of interest, are satisfaction differences between the “emergency only” versus “non-emergency” camps.

CURRENT USERS OF NOTIFICATION SYSTEMS VALUE CUSTOMER SERVICE AND SPEED OF DELIVERY THE MOST.

LEVEL & DRIVERS OF SATISFACTION

Understanding public safety managers’ level of satisfaction with ENS can help identify areas for improvement or unfulfilled needs for vendors. It can also help to inform vendor evaluation, both for municipalities looking to change MNS platforms, as well as for the half of the market that has yet to deploy a system. How satisfied are MNS managers with their systems and vendors?

Figure 7



To understand this construct better, the survey asked respondents to rate their overall satisfaction on a five-point scale.

Overall results indicate MNS users are relatively satisfied with their application and current vendor, though, like all products and services, there are exceptions. 58 percent of those surveyed said they are “very satisfied”. (See Figure 7.) 24 percent say they are “somewhat satisfied.”

A number of factors could potentially play into whether public safety managers are satisfied with their systems. Factors like:

- Speed of message delivery
- Reliability
- Ease of activation
- System security
- Accuracy of reports
- Variety of reports
- Initial costs
- Ongoing costs
- Customer service

Which of these are the most important drivers of satisfaction? Our market study leveraged techniques for uncovering insights into the key criteria that decision makers use to determine overall satisfaction.

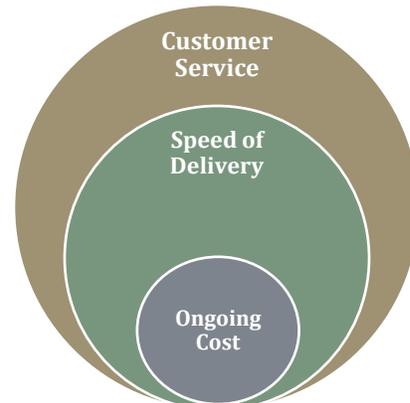
Figure 8

Based on an analysis of satisfaction ratings, we can explain more than two-thirds of what drives satisfaction by perceptions of how vendors perform relative to the following three elements:

- Customer service
- Speed of message delivery
- Ongoing costs

Of these three, customer service is clearly the most important element to driving satisfaction. (See Figure 8.) Analysis of survey responses indicate that service is 24 percent more important than speed of message delivery and more than twice as important as ongoing costs.

Top 3 Drivers of Satisfaction



VENDOR RATINGS

Overall, vendors selected for evaluation in the study received relatively high marks for overall satisfaction and performance on the product and service items highlighted above. However, it is interesting and useful to explore differences in this set of vendors where they arise, particularly for the top drivers of satisfaction.

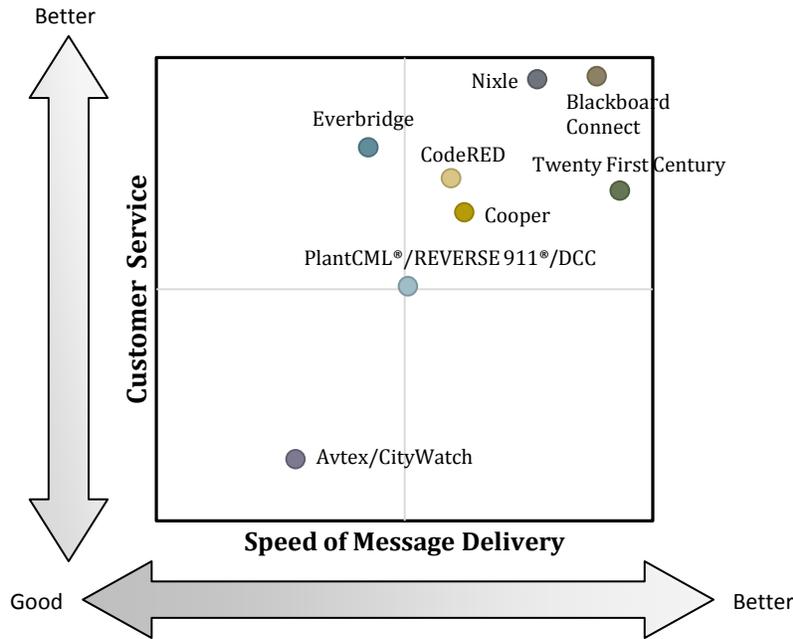
It should be noted that the following information does *not* represent poor rating performance for any particular vendor across their group of customers. Differences are really in “degrees of good.” Further, the list of vendors is by no means comprehensive, but was developed to represent a cross-section of offerings.

We plotted the top two drivers of MNS customer satisfaction on a graph, as shown in Figure 9. The distinctions represented here illustrate average scores by vendor for each of the two most important drivers of satisfaction—customer service and speed of message delivery only. Each reader and agency should evaluate their own needs and importance criteria given their unique experiences and circumstances.

While the vendors measured scored relatively high on both factors, Blackboard Connect, and Twenty First Century Communications showed the strongest combination of scores among companies offering full-featured products or services for a fee. Nixle (a non-fee service) scored high on both factors as well.

Figure 9

“Positioning Map” Top Two Satisfaction Drivers



Overall, in examining what is important to current managers of notification systems, the perceived level of customer service and perceived speed of delivering notification messages are key elements impacting public safety manager satisfaction.

FREQUENT SYSTEM USERS ARE MORE LIKELY TO BE SATISFIED.

SATISFACTION AND FREQUENCY OF USE

Whatever your stance on the debate surrounding emergency versus non-emergency use, there is interesting evidence to suggest a link exists between frequency of system use and the level of manager satisfaction with notification systems and vendors.

Average satisfaction scores were calculated for each “frequency of use” group represented in the study. As Figure 10 illustrates, agencies using their systems at least weekly rate their satisfaction statistically higher than those who use it monthly or less.

Figure 10

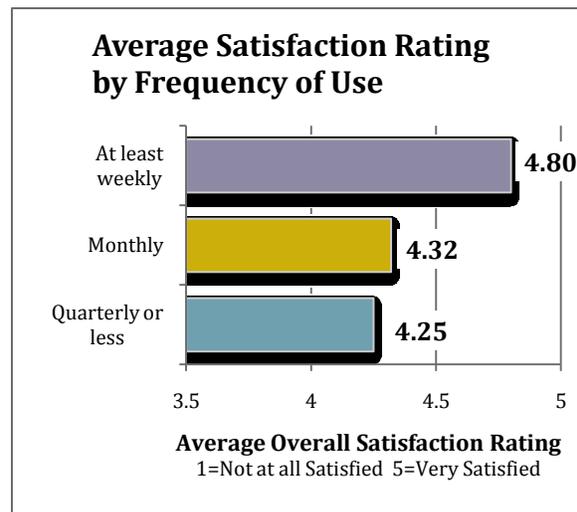
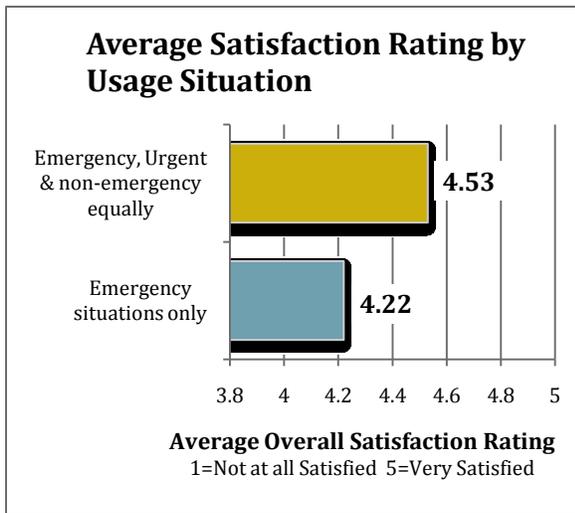


Figure 11



SATISFACTION AND USAGE SITUATION

Satisfaction also appears to be greater for those who use their system for a variety of purposes. Managers who use their systems in both emergency and non-emergency situations have statistically higher satisfaction ratings on average than those using them for emergencies only. (See Figure 11.)

These findings support the idea that exercising the system provides for a better overall experience for the agencies and the citizens they serve.

Anecdotally, we have seen this first hand. An apparent common factor for public safety organizations that “push the envelope” in using MNS tends to be the presence of an enthusiastic local champion who is dedicated to the vision and promise of an informed citizenry. Such a champion often drives key elements of notification program success such as department education, training, local marketing, continued funding, systems integration, etc. As focus on the program grows, so does success—ultimately generating positive feelings and solid results throughout the organization and the community.

CONCLUSION

Over the past decade, mass notification systems have moved from relative obscurity to indispensable tools for informing and protecting the public. Their proven effectiveness in alerting communities has been illustrated in a wide variety of critical events across all geographic regions.

The research presented here uncovers important changes and developing trends within the MNS marketplace. Clearly, the manners in which these systems are deployed and used are transitioning. Yet, what is not changing is the need for better communication and interaction with the public in times of crisis. Citizen expectations regarding information are growing, not shrinking. As such, emergency notification will continue to play an important, expanding role in protecting and serving the American public.

Blackboard Connect for Government client success stories

Looking for more information about how your community can maximize the benefits of mass notification services? Want to know how other communities successfully address community outreach and enhance public safety with the same communications solution?

Blackboard Connect has a number of case studies featuring cities and counties that are successfully employing mass notification for a range of applications, including community engagement and leadership, revenue generation and safety and security.

To learn more, visit www.blackboard.com/gov/connectstories.



About Galain Solutions, Inc.

Galain Solutions, Inc. is an independent consultancy providing services to government and public safety agencies in areas relating to crisis management, collaboration, and critical communications technology, including notifications, alerts and warnings.

Galain also helps companies seeking to enhance growth and success in government markets, with expertise in sales, marketing, market research, the grants process, and the American Recovery and Reinvestment Act (ARRA).

Galain Solutions, Inc. is based in Franklin, Tennessee a suburb of Nashville.

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