

RESEARCH REPORT

Social Media Guidebook for Law Enforcement Agencies

Strategies for Effective Community Engagement

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Social Media Guidebook for Law Enforcement Agencies

Social media can serve as a valuable tool for law enforcement agencies to disseminate information to the public and gauge community sentiment regarding agency policies and practices. As such, law enforcement agencies are increasingly exploring the potential of social media engagement as a strategy to improve communication and public relations with the communities they serve. However, very little research exists on how social media engagement can be used to improve communication and community relationship building, and what strategies leverage this technology most effectively.

While law enforcement-serving organizations such as the Community Oriented Policing Services (COPS) Office within the U.S. Department of Justice and the International Association of Chiefs of Police (IACP) have published resources on how to use social media, existing social media guidebooks and resources typically focus on topics such as getting started with social media or how to use social media as an investigative tool, rather than employing social media as a community engagement tool.¹

This guidebook is a result of a research project launched by the Urban Institute (Urban) and the COPS Office to understand how to promote social media engagement for more transparent, trustworthy, and effective law enforcement. Working primarily with Twitter data, the project examines how law enforcement agencies can use social media as an effective community policing tool. This guidebook provides data-driven recommendations and step-by-step strategies for agencies that want to use social media to enhance community engagement. The strategies focus mainly on Twitter, but could apply to other social media platforms.

This report explains four steps to more effective use of social media:

1. Establish a baseline
2. Set goals
3. Measure performance
4. Implement strategies to improve performance

After describing community policing and the importance of communication as a vehicle for enhanced community engagement and public safety, these four steps are described as a roadmap for agencies aspiring to use social media more effectively.

Community Policing and the Importance of Communication

Marked by working with communities to solve mutually identified problems, community policing is an important policing strategy that proactively promotes public safety (COPS, 2012). Community policing uses community partnerships and problem-solving techniques to address concerns related to crime, social disorder, and fear of crime. Transparent and open communication with community members is essential to building relationships that increase trust in police and lead to the development of collaborative solutions to problems.

Social media can help advance the goals of community policing by humanizing law enforcement, disseminating information, and engaging citizens (Marshall, 2011). One prominent example of the utility of social media occurred after the Boston marathon bombing in 2013. Police used Twitter to inform the public about safety issues, road closures, and ongoing investigations (Davis, Alves, and Sklansky, 2014; Franks and Evans, 2015). Social media allows law enforcement to shape emerging narratives and communicate directly with the public, rather than rely on traditional media outlets to cover events and provide information (Norwood and Waugh, 2012). Social media also helps agencies target their communications or broaden their outreach (Brewer and Bray, 2014) while promoting transparency by making the information widely and publicly accessible (Alexander, 2011; Jones and Johnson, 2011).

In order for law enforcement agencies and communities to work together to address issues, there must be clear channels for communicating and disseminating information. Through effective communication with the public, law enforcement agencies should encourage or motivate citizens to become involved (Trojanowicz, Kappeler, and Gaines, 2002). Further, communication and transparency are essential to building police-community relations and public trust (Gokey and Shah, 2016). Enhanced communication, facilitated by social media engagement, can lead to greater community cooperation in partnerships to prevent crime.

1. Establish a Baseline

Before deciding steps to take to improve the use of social media, it is important to first understand how your agency currently uses social media. Creating this baseline helps with determining what works well and what needs to be changed. This section describes how other law enforcement agencies use social media and how to take stock of your agency's current policies and practices.

Types of Social Media

Law enforcement agencies utilize many types of social media. According to a 2015 survey, 94% of responding agencies use Facebook, 71% use Twitter, and 40% use YouTube (IACP, 2017). Less commonly used platforms are LinkedIn (27%), Nixle (24%), Instagram (21%), Nextdoor (20%), and Google+ (19%). The general population in the United States also uses social media platforms at different rates. As of January 2018, 73% of all Americans used YouTube and 68% used Facebook, while 35% used Instagram and 24% used Twitter (Smith and Anderson, 2018). These rates vary by age group, with 18- to 29-year-olds using these platforms at higher rates.

Law enforcement agencies likely use a combination of platforms to reach multiple audiences. Although people who use one social media platform are likely to use other platforms, using multiple platforms ensures that your agency's content reaches a broader group of people. It is important to keep in mind the capacity of your agency to manage multiple platforms. For each platform, your agency should be able to consistently post content, monitor user engagement, and respond to users, if allowed. Some questions to guide your baseline assessment of your agency's social media use include:

- What social media platforms does your agency currently use?
- For each platform, does your agency post content, monitor content, and/or respond to community users?
- What audience does your agency aim to reach?
- Are there other platforms your agency wants to use? If so, is there capacity to do so?

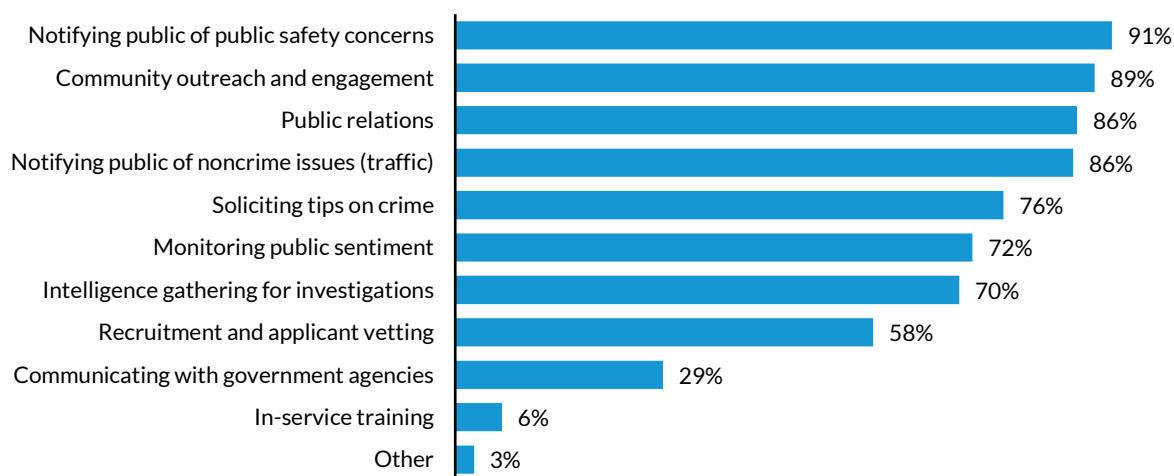
Purpose of Social Media

Law enforcement agencies use social media for a variety of purposes. In 2016, the Urban Institute partnered with IACP to survey law enforcement agencies on their use of social media (Kim, Oglesby-

Neal, and Mohr, 2017). Over 500 agencies responded to the survey. Agencies were asked many questions, including why they currently use social media. The most common purposes are shown in figure 1, and include notifying the public of safety concerns, community outreach and engagement, public relations, and notifying the public of noncrime issues.

FIGURE 1
Uses of Social Media

2016 Law Enforcement Use of Social Media Survey



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Law enforcement agencies use social media for both external purposes, including community engagement and public notifications, and internal purposes, including investigations and recruitment. Your agency may use social media for reasons beyond those included in the survey. Thinking through the internal and external purposes of social media can help your agency identify the reasons it currently uses social media. Some guiding questions are:

- Why does your agency use social media?
- What are the internal (within the agency) and external (public-facing) purposes?

Social Media Content

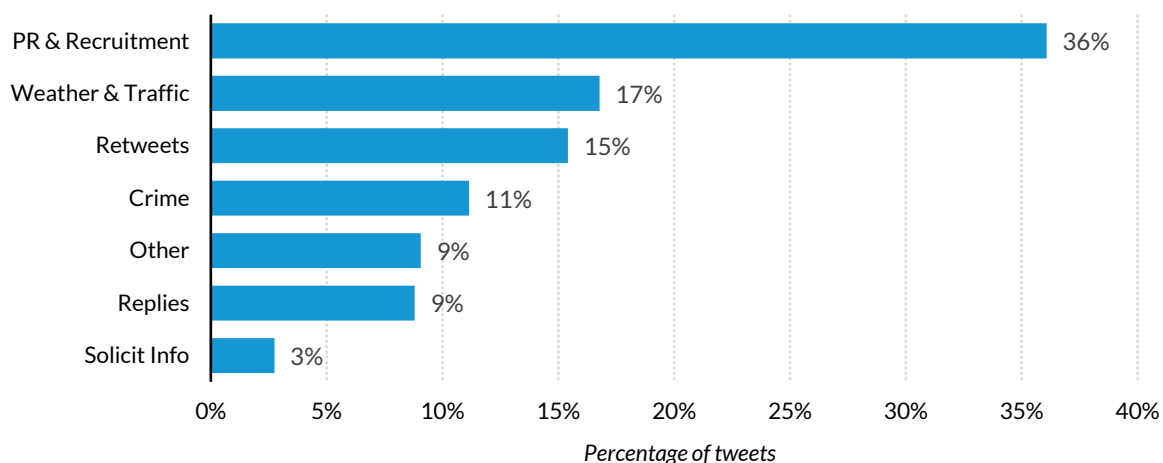
Each social media platform allows for different types of content to be posted and shared. The structure of the content can include text, pictures, videos, links to websites or articles, events, and more. Both the content structure and topic can vary widely. As part of this project, we examined the tweets of over 300 law enforcement agencies and categorized those tweets into seven different types.² From January 1,

2017 to June 30, 2017, 280 of these agencies tweeted a total of 86,977 times. The distribution of the topics of these tweets is shown in figure 2.

FIGURE 2

Topic of Law Enforcement Tweets

Tweets of 280 agencies, January–June 2017



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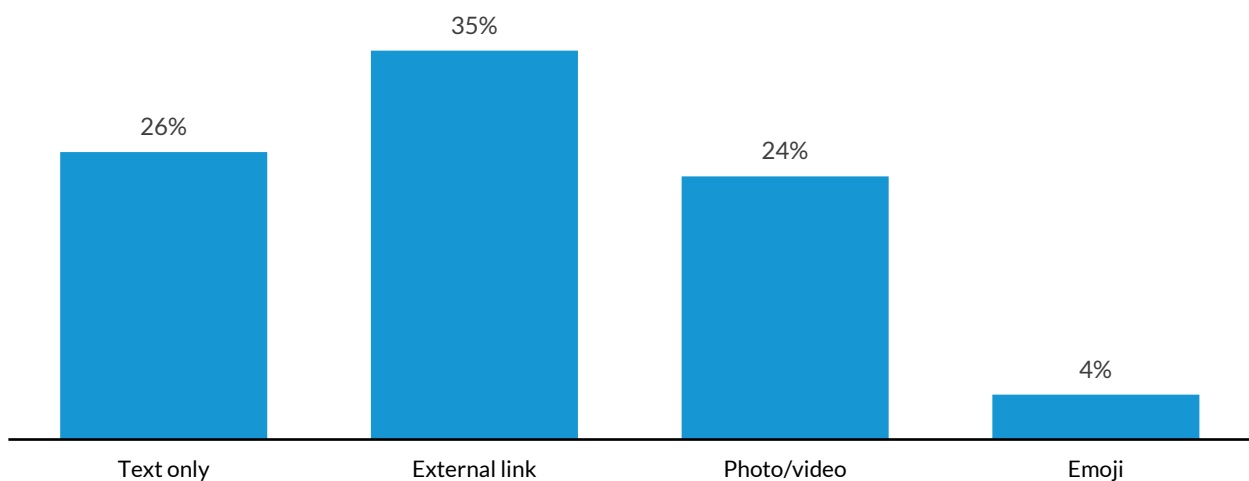
Over a third (36%) of tweets were about public relations or recruitment, while 17% were about weather, traffic, or road closure updates. Retweets composed 15% of tweets, as agencies often retweet other law enforcement and government agencies' tweets. Less popular tweet types included crime notifications (11%), replies to other users (9%), and requests for information, such as a suspect or missing person (3%). The topics of law enforcement tweets serve the purposes of social media for public relations, community engagement, and notification of public safety concerns.

We also explored the different structures or types of content that agencies shared. Only about one-quarter of tweets contained only text, with no links to other tweets or external websites, photos/videos, or emojis. About one-third of tweets (35%) included a link to an external website. Agencies also often include photos or videos in their tweets (24% of tweets), which can catch the audience's eye more effectively than text alone. A few agencies have also embraced more informal social media conventions like emojis (4% of tweets). To conduct a systematic assessment of the content your agency shares, the following questions can be explored:

- What types of content does your agency share on social media?
 - » Pictures, videos, external links, emojis?

- What are the topics of the content?
 - » Does the topic vary by social media platform?
 - » What are the most common and least common topics?

FIGURE 3
Content Types of Law Enforcement Tweets
Tweets of 280 agencies, January–June 2017

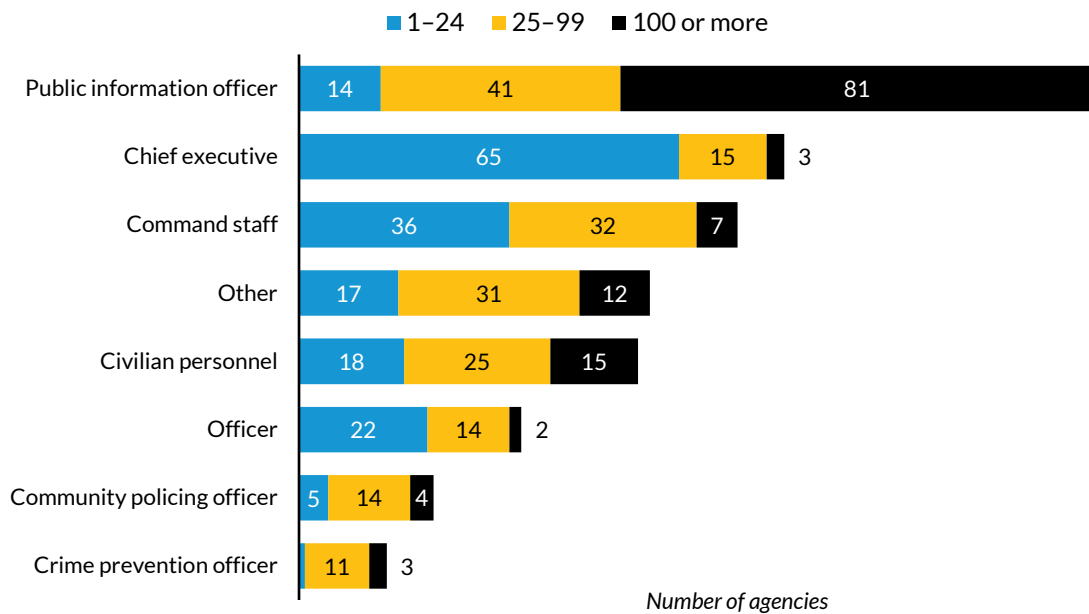


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Social Media Management

Agencies vary widely in their size and structure, and this often affects who maintains primary responsibility for managing the agency’s social media accounts, be it a public information officer, the chief executive, civilian personnel, or someone else. As shown in figure 4, larger agencies that are more likely to have the resources to sustain a public information officer tend to delegate responsibility for managing social media to that position. Smaller agencies, however, tend to use a wider variety of staff positions.

FIGURE 4
Primary Social Media Manager Varies by Agency Size
Size determined by number of full-time sworn personnel



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Source: 2016 Law Enforcement Use of Social Media Survey.

Agencies also vary in the amount of centralization of their social media presence, such as whether individual officers are allowed to maintain their own professional accounts, whether content needs to be approved by a central group before posting, and when and how content should be updated, deleted, and archived. Your agency’s policies on these issues will affect how it implements the steps that follow in the rest of this report. For example, consider:

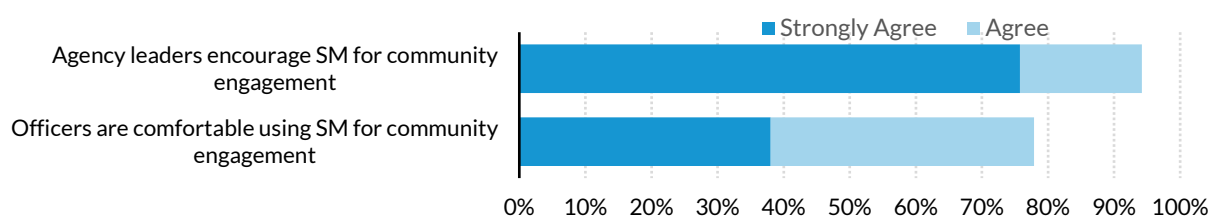
- Who is responsible for managing your agency’s social media accounts? Do they need to get approval from someone else before posting? How will their work be supervised and evaluated?
- What other duties will this person need to manage in addition to social media? For example, smaller agencies may not have the resources to support a full-time social media manager. Whoever is responsible for managing the agency’s social media accounts may need to balance that with other responsibilities. How much of their time should they expect to spend on social media?
- During what hours will the social media manager be responsible for monitoring the social media accounts (e.g., a typical 9-to-5 schedule, only during their scheduled shifts, weekends)?

Depending on jurisdictional capacities and organizational climate, agencies vary considerably in the degree of centralization when it comes to the management of social media engagement. Although there are strong proponents and opponents for both centralized and decentralized management systems among subject matter experts, it is important to evaluate the feasibility and implications of implementing each type of system in your local setting. The type of management that agencies should seek to adopt is the one that affords sufficient accountability and oversight while ensuring channels for the dissemination of relevant and useful information to the public. Agencies should avoid imposing too much restriction on how the agency or its employees should engage in public conversations through social media.

2. Set Goals

Once your agency has established a baseline for its social media activity, it can develop goals that summarize what it wants to achieve through its use of social media. Although there are many types of social media goals your agency could have, this guidebook focuses on improving community engagement and transparency. In our 2016 survey, over 90% of responding agencies agreed that leadership encouraged using social media for community engagement (see figure 5). Further, nearly 80% of agencies reported that officers are comfortable using social media for community engagement. Engaging the community with social media was also the most commonly desired training topic selected by agencies. These results demonstrate that many agencies are supportive of social media as a community engagement tool and are interested in learning how to improve their use of social media for this purpose.

FIGURE 5
How Agency Staff Feel About Using SM for Community Engagement



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Source: 2016 Law Enforcement Use of Social Media Survey.

According to the 2016 Law Enforcement Use of Social Media Survey, only 33% of agencies had developed goals for their social media use (Kim, Oglesby-Neal, and Mohr, 2017). Some questions to help your agency identify goals of social media use include:

- What types of engagement does your agency want to improve?
 - » Increased dissemination of information, direct conversations with the public, tips from the public, etc.
- How does your agency want to increase transparency?
 - » Increased community input on agency policies, increased transparency about high-profile incidents such as police-involved shootings, etc.

CASE STUDY

Palo Alto Police Department

When the Palo Alto Police Department originally began developing its social media presence several years ago, they wanted to improve their relationship with the media, but they also ended up improving their online engagement with the community at large in the process. For Captain Zach Perron, social media is about transparency and getting accurate information out to people as quickly as possible. “We have a lot of high school kids that follow us, for example. If we have a school shooter, I want those kids to see what we know and what we’re telling them to do directly from us.”

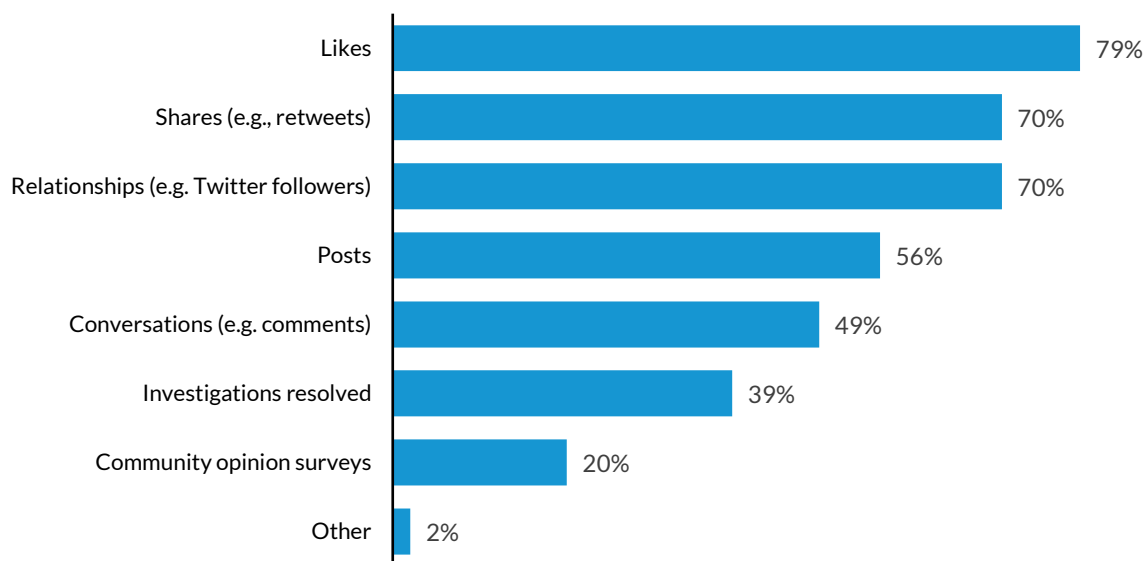
For this approach to work, the department needed to build its following to maximize the number of people getting their information and updates. Perron turned to strategies like humor to help him expand the department’s audience. “All the humor that I use, the interplay with sports teams and things like that, it’s all designed to get as many followers as we can.”

Another strategy Perron employed was to respond as consistently and quickly as possible to comments or questions from the public on social media. “I want to knock their socks off—because people don’t expect that from government. ... I want to do that because it’s going to shock them that government is that responsive, and then when it shocks them, they’re going to tell all their friends and hopefully their friends will then follow us too.” But he didn’t stop at just reacting to comments or questions as they come in. He also proactively started conversations by replying to tweets mentioning Palo Alto, thereby striking up conversations with users who had not followed the police department until then. This practice is highly consistent with the principles and tactics of traditional community policing, which can be broadly applied to social media. “I think a mistake that a lot of agencies make is that they may say they’re responsive, but they’re waiting for somebody to ask them a question. The police can initiate conversations too.”

3. Measure Performance

When developing goals, it is important to ensure that they are specific, measurable, achievable, relevant, and have a timeline. After your agency has developed goals for how it would like to improve its social media use, the next step is identifying and tracking the appropriate metrics to measure your agency’s performance toward achieving those goals. Figure 6 shows the metrics used by agencies who reported in the social media survey that they have identified social media goals. Likes are the most common measure (79%), followed by shares (70%), and number of followers (70%). To a lesser extent, agencies also reported using posts, conversations, investigations resolved, and community opinion surveys to measure their progress (Kim, Oglesby-Neal, and Mohr, 2017).

FIGURE 6
How Agencies Measure Progress Toward Social Media Goals
2016 Law Enforcement Use of Social Media Survey



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Source: 2016 Law Enforcement Use of Social Media Survey.

As shown in table 1 below, many common metrics can be mapped to goals related to increasing transparency and improving community engagement. For example, the number of shares (e.g., retweets on Twitter) your posts receive can measure progress toward increasing transparency, because the more your posts are shared, the more people will receive the information that your agency is providing and have the opportunity to provide feedback on it. Similarly, tracking metrics like the number of replies to

your audience and the number of proactive posts (i.e., posts that are not in response to incidents like crime or traffic) can measure progress toward improving community engagement on the part of your agency, while the number of shares, the number of replies from your audience, and the sentiment of those replies can measure community engagement on the part of the public. Because of the potentially fast-changing nature of your social media audience, it's important to track not only the numbers of shares and replies, but also their rates. For example, your agency may gain a large number of followers, but if those new followers rarely share or reply to your posts, the rates of engagement could actually decrease.

TABLE 1
Example Performance Metrics

Metric	Goal	
	Transparency	Community Engagement
Number/rate of shares	X	X
Number of followers	X	
Number/rate of replies to audience		X
Number/rate of replies from audience		X
Number/rate of proactive posts		X
Sentiment		X

Another potential metric is the sentiment of public posts about your agency. Social media users may tweet directly to your agency by including your agency's Twitter handle in a tweet or replying to your agency's tweets. The sentiment of these tweets (i.e., positive, negative, or neutral) can be used to determine your agency's progress towards community engagement. For example, an increase in the percentage of positive tweets that mention your agency over time likely indicates an improvement in community engagement. Since this particular metric can be overly sensitive to a single incident or event, however, it is important not to over-generalize your agency's progress towards community engagement over a short period of time or to make comparisons to other agencies.

It is also important to consider the process your agency will use to track its metrics. One option is to track them manually, such as by having someone periodically check the relevant metrics and enter the data into a spreadsheet. This approach requires minimal resources to set up, but it does require a significant amount of ongoing staff time. An alternative option is to set up a system that will automatically track, store, and display your agency's metrics for review. This option requires more upfront investment of time and resources but streamlines the process of monitoring the metrics over

time. A third option is to explore existing social media dashboard software; however, these may not be customizable enough to support the tracking of the metrics your agency is interested in. Agencies (particularly smaller agencies who may not be able to pursue more resource-intensive options) could also consider forming partnerships with local research or other organizations that have more capacity for setting up a system for tracking performance metrics.

Questions to consider when identifying appropriate performance metrics and tracking strategies for your agency's social media goals include:

- What aspects of the social media platforms your agency uses can be measured (e.g., shares, followers, replies)?
- Can these measures be linked to your goals? In other words, will tracking these measures provide a reasonably good evaluation of how well your agency is meeting its goals?
- What is your agency's capacity for tracking these measures? For example, will they be tracked through manual data entry, or can the process be automated?

CASE STUDY

Southeastern Pennsylvania Transportation Authority (SEPTA) Transit Police Department

SEPTA Transit Police Chief Thomas J. Nestel III began using social media professionally when he worked for a small suburban police department. He started with Nixle, a service that allows local government agencies to send community members information via text message and email. The community responded well to the service, but Nestel soon found himself thinking, "If there was just a way that we could have two-way communication, so that I could find out what people in the community felt was important for the police to focus on."

Nistel joined Twitter in 2012, and has since tweeted over 26,000 times. He often solicits input from the community, including asking for feedback on a draft body camera policy. "I need to have information from people who aren't in police work to help me do a better job." And even when they are not solicited, he frequently receives suggestions from the community and incorporates them into his practice. For example, he stopped posting identifiable pictures of people who had been arrested after receiving a comment on Twitter.

Nistel's own social media approach leans on humor and an openness to engaging in respectful conversations with community members both online and out in the world. He recognizes that what it requires to be successful in engaging via social media is contrary to many traditional principles of policing. But, if you want people to listen and engage, he says, "you have to be funny, a little edgy, and willing to take risks."

4. Implement Effective Strategies

Once your agency has identified the metrics it wants to use to track progress toward its social media goals, it should implement appropriate strategies to work toward those goals. We examined the Twitter accounts of over 200 law enforcement agencies and how certain characteristics of their accounts (e.g., number of followers) and tweets (e.g., day of the week, whether the tweet included an image or video) improved some of the performance metrics listed above. Below we describe several data-driven strategies for improving community engagement on social media based on our results.

Develop Relationships with Community Members and Organizations That Have Large Audiences

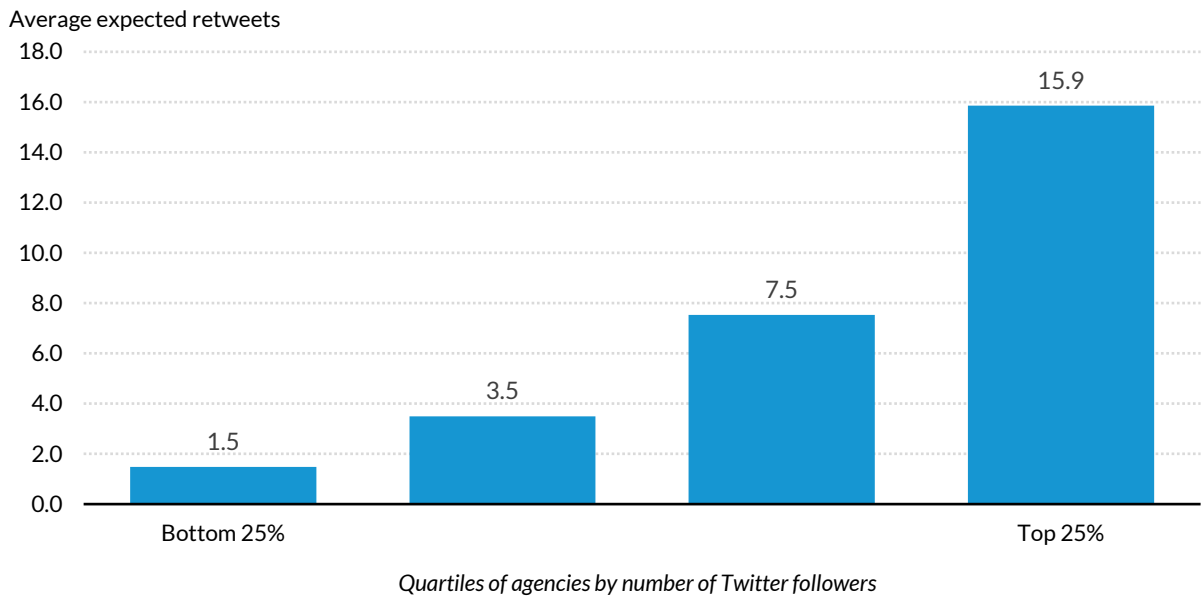
One way to increase the size of your agency's audience is to develop social media relationships with other community members or organizations who already have large audiences. Interacting with these people or organizations via social media makes it more likely that they will in turn reply to or share your agency's posts with their audience, exponentially increasing the number of people who will see and/or share your posts. As an example, we examined the effect of the number of Twitter followers on the number of retweets (figure 7).

Schedule Posts for the Beginning of the Week When Possible

Our data showed that tweets posted on Sunday or Monday tended to get more retweets than tweets posted during the week (figure 8). Posting at the beginning of the week may be an effective strategy to increase community engagement for information that is not time-sensitive. For example, posts showing officers at work or events in the community or posts providing crime prevention tips may be good candidates for weekend posts. Social media scheduling software can make this easier by allowing your agency to set tweets or other content to post ahead of time.

FIGURE 7

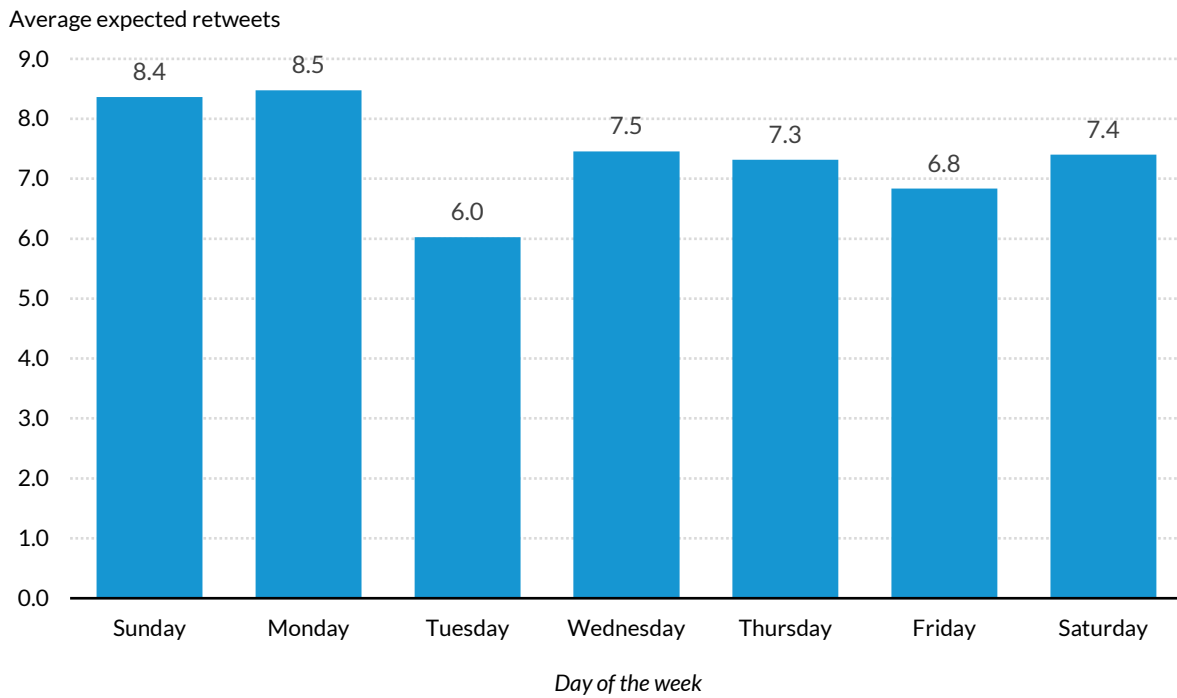
Retweets Increase with More Followers



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FIGURE 8

Posts Early in the Week Get Shared More Often

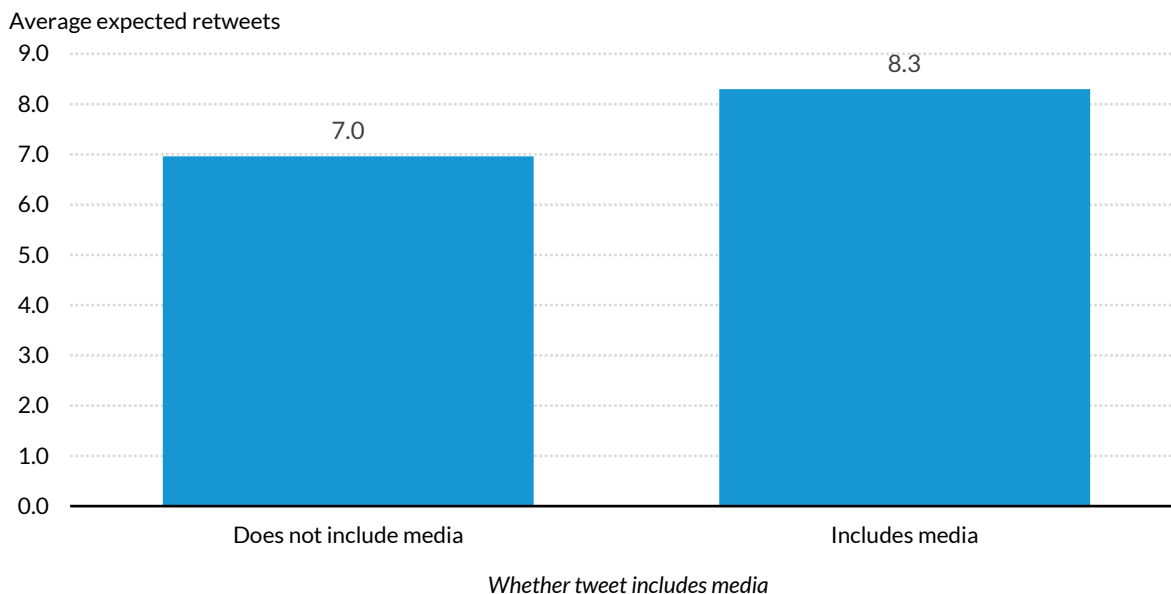


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Include Media Such as Photos and Videos in Your Posts

Tweets that include photos or videos tend to be retweeted more than all-text tweets (figure 9). It may be because the images are more likely to catch people’s eye while scrolling, or because people more often want to share the content of the photos or videos. Examples of types of photos posted by law enforcement agencies include photos of officers participating in community events, event posters, and photos of missing persons or suspects for identification. However, many agencies have informal policies not to post pictures of people who have been arrested (e.g., mugshots) to avoid unnecessary stigmatization.

FIGURE 9
Posts That Include Photos or Videos Are Shared More Often



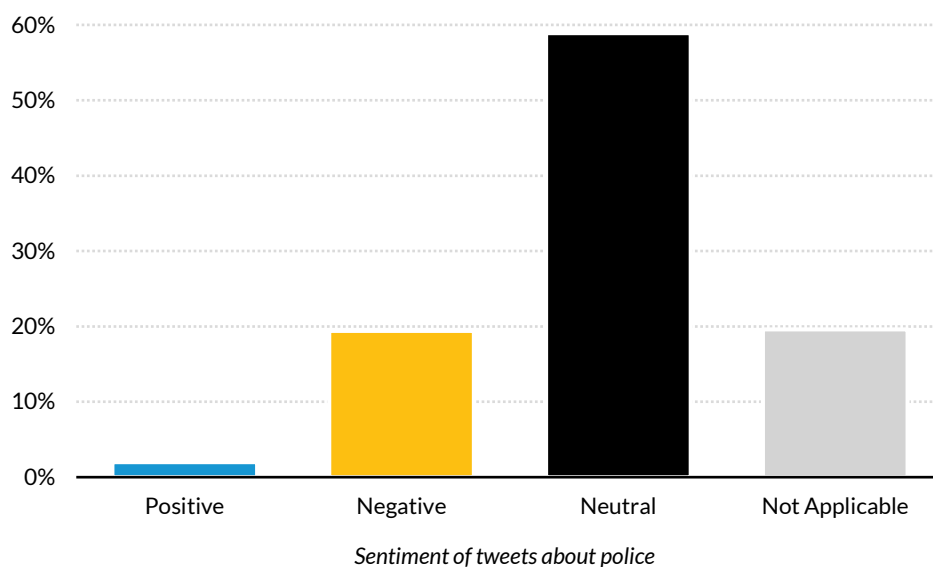
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Regularly Monitor Social Media Mentions of Your Agency

Regular monitoring of posts about your agency on social media can help track not only the public’s engagement with your agency but also whether that engagement is positive or negative. In order to measure public sentiment toward your agency, staff could regularly read a sample of tweets and then classify each tweet as positive, negative, neutral, or not applicable. Determining sentiment tends to be quite subjective, so it can be helpful to have more than one staff classify the same tweets and compare answers to ensure they have a common understanding of the categories. In our analysis of the sentiment of public tweets about police in general, there were far more neutral and negative tweets

than positive ones (figure 10), which likely reflects how people are more likely to share information on social media when they think there is a problem (Oglesby-Neal, Tiry, and Kim, 2018). Monitoring how sentiment changes over time or the themes of positive and negative tweets can provide insight on community perceptions of your agency’s engagement.

FIGURE 10
Sentiment of Tweets about Police



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Note: Sentiment of tweets that mention “police” or “cop” from 1/12/14 - 6/12/14 and 1/12/15 - 6/12/15.

Although posts providing information about crimes or traffic issues can improve the community’s perception of your agency’s transparency, posts about officers at work or events tend to invite more active engagement from the community. Posting this type of content on a regular basis can improve both online and real-world community engagement. For example, social media campaigns like #CoffeeWithACop use social media conventions like the hashtag to promote real-world engagement events where police officers are available to talk with community members over coffee.

Implement These Steps Within Your Overall Social Media Strategy

While we were able to develop several specific recommendations based on our analyses of the Twitter data and agencies’ survey responses, there are a number of relevant topics that our data could not

address. For example, we used only data from Twitter to develop our recommendations. Although the general framework may still apply, the specifics may vary by social media platform. Additionally, our recommendations speak to specific actions your agency could take, but it is also important to consider implementing these actions within the context of a larger social media strategy. The following resources have additional information on these topics, as well as case studies of agencies on the leading edge of social media:

- [IACP Center for Social Media](#)
- [ConnectedCops](#)

Conclusion

Social media can be a helpful tool for law enforcement agencies to improve transparency and build relationships within their communities. Doing so is critical in enhancing community partnerships in crime control and prevention. In this guidebook, we've laid out a set of steps for agencies who want to improve their use of social media as a community policing tool. The first step is to assess your agency's current social media use and capacity. With this baseline in mind, your agency can then set social media-related goals. For each of these goals, your agency should next decide on the appropriate metrics to measure progress towards those goals. Lastly, your agency can implement data-driven strategies to improve each measure and help your agency reach its goals.

The data we used in our analysis of what tweet and agency characteristics affect social media performance came from a wide variety of agencies in terms of size, location, and social media experience. Importantly, our analysis revealed that these characteristics were not particularly important in predicting social media use. Instead, the most important agency-level factor was whether agency leadership encouraged community outreach through social media. Our findings suggest that nearly any agency that has buy-in from leadership can effectively engage with their community through social media.

Appendix. Methodology

Data Collection

Part of our goal in collecting social media data was to be able to link the self-reported social media policies and practices of law enforcement agencies with actual social media activity. In order to do this, we identified 303 agencies who responded to our 2016 Law Enforcement Use of Social Media survey and had public Twitter accounts, and we collected their account names. Beginning in January 2017, we wrote and began running a program that would collect information about each agency's tweets on a monthly basis through July 3, 2017 using Twitter's public API service. This allowed us to collect approximately six months of prospective data, as well as up to 3,200 past tweets for each agency. In total, we collected 537,251 tweets.

The data we collected included tweet content, such as a tweet's text, any images or videos, hashtags, user mentions, and URLs. We also collected metadata about each account, including when the account was created, how many followers it had, and its total number of tweets, as well as metadata about each tweet, such as when it was posted and the number of retweets it received.

Topic Classification

Another of our goals in collecting this data was to be able to describe the types of things that law enforcement agencies post on social media. To determine what topics agencies were tweeting about, we needed to categorize each of the tweets we collected. Rather than having someone read and manually categorize each of the more than 500,000 tweets and determine which category it belonged to, we took the approach of predicting the tweet topics based on text analysis and machine learning.

The first step of this process was to determine which categories we were interested in. Our categories were based on the topics identified by Heverin and Zach (2010); however, we combined some categories to make prediction easier. We ended up with seven total categories, but we only needed to predict five of those, as we were able to identify replies and retweets directly through the tweet text and metadata. Our final categories were 1) crime/incident information; 2) department information and events; 3) weather, traffic, and crime prevention tips; 4) person identification; 5) replies; 6) retweets; and 7) other.

Although we wanted to avoid manually categorizing every tweet, some manual categorization was necessary. In order for the machine learning process to work, it needed to have some examples of tweets with known categories to learn from, so we manually categorized a random sample of approximately 800 tweets to use as examples. Once these tweets were categorized, we began processing the data for analysis. This included cleaning and standardizing the tweet text through processes like “lemmatization,” which changes all words to their root form (e.g., “walked” becomes “walk,” “is” becomes “be”). We also replaced certain features of the tweet text with a uniform placeholder. For example, we replaced all numbers with the same number placeholder so that the model would pay attention to the existence of any number in the tweet rather than which specific number it was. Finally, we added variables to the data based on the sentence structure and parts-of-speech in the tweet. For example, we added variables that counted how many nouns, verbs, and adjectives were in each tweet. Both the lemmatization and the sentence structure analysis were done by running each tweet through CoreNLP, a natural language software developed by Stanford University’s CoreNLP.

In order to analyze text data, we needed to format the data in a way that a computer could work with. We created a document-term matrix, which essentially turns any word that exists in our tweets into its own variable. Each tweet becomes an observation, where each word variable equals one if the word exists in the tweet and zero if not. We then tested several machine learning models on these data and examined their performance. Essentially, using a portion of our manually categorized tweets, the models try to identify which words and characteristics of a tweet tend to be associated with a particular category. For example, the words “arrest”, “robbery”, and “incident” were the most associated with the crime/incident information category, while the words “traffic”, “close”, and “lane” were most associated with the weather, traffic, and crime prevention tips category. We then ran the models on the rest of the manually categorized tweets to test how accurate the model predictions are. Our final model was a gradient boosted classifier, which had 72 percent accuracy on this test data. We used this model to predict the categories of the rest of the uncategorized tweets.

Analysis of What Predicts Social Media Engagement

After categorizing all the tweets we had collected, we linked them with the self-reported survey responses from each agency. Another of our goals for this project was to examine the agency-level characteristics of self-reported social media use (from the survey data) along with the tweet-level characteristics of actual social media use (from the Twitter data). We wanted to see how these

characteristics affect public engagement (in the form of retweets) with law enforcement on social media.

Our approach was to use a negative binomial model which would, like the machine learning approach described in the previous section, determine which characteristics were most associated with more retweets. To ensure that we were capturing Twitter behavior around the same time that the agencies responded to the survey, we limited the tweets included in the model to those occurring between January 1, 2017, and June 30, 2017. Our final model included 64,941 tweets from 221 agencies and included both agency-level and tweet-level characteristics, shown below:

TABLE A.1

Characteristics Included in Social Media Engagement Model

Tweet-level	Agency-level
Tweet category	Population served
Time of day	Interactivity score
Day of week	Humor score
Has hashtag	Agency has social media policy
Has user mention	Agency has social media manager
Has photo or video	Agency leadership supportive of social media for community outreach
Has emoji	
Number of followers	
Number of tweets	

The tweet-level characteristics came from the Twitter data and the agency-level characteristics came from the survey data. The interactivity and humor scores were developed by adding together and standardizing the agencies' responses from several survey questions. The interactivity score combined the following questions:

- Does your agency respond to user questions?
- Does your agency like user comments on social media?
- Does your agency leave comments on others' social media pages?
- Does your agency respond to negative comments?

The humor score combined the following questions:

- How often does your agency use an informal tone?
- How frequently does your agency use humor?
- Do you agree that there is a time and a place for humor on social media?
- Will you play along with a joke on social media?

Notes

- ¹ For example, see the list of publications available at IACP's Center for Social Media Publications page: <http://www.iacpsocialmedia.org/resources/publications/>.
- ² For more information on the method that we used to categorize all tweets, see the appendix.

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