

THE DOLLARS AND SENSE OF VIDEO EVIDENCE MANAGEMENT

5 THINGS YOU NEED TO KNOW
FOR COST-EFFECTIVELY
INTEGRATING AND DEPLOYING
BODY-WORN CAMERA SOLUTIONS



INTRODUCTION

Across the country, law enforcement agencies large and small are evaluating and/or deploying body-worn camera solutions as a tool for their officers in the field. In the past few years this new technology has already had a significant impact on policing, and this impact promises only to grow in the years to come.

It's easy to understand why body-worn camera solutions have skyrocketed in popularity. According to 2014 report from the Police Executive Research Forum and the U.S. Department of Justice's Office of Community Oriented Policing Services, benefits reported by police leaders include the systems' usefulness in documenting evidence, training officers and improving officer performance. By providing unbiased video evidence of officer interactions, body-worn cameras also have the benefit of promoting accountability and transparency to strengthen relations between a community and its police force. A study based on a 12-month trial in Rialto, California, found

that complaints against police fell 90 percent during the study period compared with the previous year. In the same time period, the study also showed a 50 percent reduction in use of force by officers.

For veteran officers, body-worn cameras are the latest in a long line of innovations—from in-car cameras and gunshot detection systems to tablet computers and predictive analytics—that didn't exist when they started their careers, but now have the power to transform them. But as we've learned with these past technologies, introducing an all-new type of solution can be costly and disruptive. As a result, it's important for agencies to do their homework before deploying any new technology in order to understand total costs and gain the maximum benefit from the investment.

Numerous factors must be considered for a successful deployment of body-worn systems. These include funding considerations, policy development, community outreach, training and more. Privacy and legal concerns must also be addressed, and it is important to gain the support of the frontline officers who will be wearing the cameras, as well.

IT considerations, of course, must be factored in to any agency's plan for body-worn camera solution deployment. With each of these systems creating roughly 1 GB of new data for every hour of video shot, an important question is how agencies can cost-effectively manage all the video evidence these systems produce. In almost every case, body-worn cameras are deployed in conjunction with existing mobile video evidence collection systems such as in-car cameras, and may accompany other sources of video evidence such as traditional surveillance cameras. Agencies can potentially face significant challenges when it comes to uploading, storing and managing all this video evidence data, and keeping it secure while also making it accessible when it is needed.

For law enforcement organizations looking for the best possible return on investment on body-worn video, smart strategies for evidence management must be a critical part of the game plan. Agencies should look for solutions that are flexible, work with their existing technology investments, and allow them to manage all their video evidence in a unified, holistic manner.

In a 2014 study, 62% of public safety respondents said they were evaluating or planning to deploy wearable devices.



5 THINGS YOU NEED TO KNOW

1 BEST-IN-CLASS BODY-WORN CAMERA HARDWARE IS JUST ONE PIECE OF THE PUZZLE.

A quick scan of the market reveals half a dozen or more companies today offering body-worn camera systems to law enforcement. But a closer look at their devices reveals that not all systems are created equal. For law enforcement agencies seeking the best possible long-term return on investment, durable and reliable hardware that captures high-quality video and sound should be table stakes. Here's what to look for:

PURPOSE-BUILT DESIGN ELEMENTS

Does the camera have a wide enough field of view to capture everything that is happening at the scene? Is the device easy to use, or will officers need to fumble with it every time they need to record an interaction? How does an officer tag a video as classified? Does the device offer flexible mounting options, or is it one-size-fits-all? Can the hardware be integrated with your existing evidence collection and management systems? It's critical to think through these questions and more, and select a device that is versatile and designed for the real-life working conditions your officers face in the field.

FILE METADATA

Body-worn camera systems must be able to log meta-data, or "data about the data," such as time and date and the identity of the officer who recorded the video. Newer solutions also have built-in GPS capabilities, which provide important meta-data about where the video was recorded. In a recent working paper, the Data & Security Research Institute recognized the value of GPS metadata in body-worn video, noting that "incidents can spread out over multiple locations, and the lack of precise location metadata can decrease the evidentiary value of these recordings."

HD VIDEO RESOLUTION

Look for a camera with a minimum 720p HD video resolution, which captures substantially higher quality video than previous generation's VGA video resolution cameras, but without unnecessarily impacting storage requirements. Higher resolution video is inherently more valuable, and is more likely to capture critical details, or details at a farther distance, that can help your officers to complete a report or close a case. Other features to look for include image stabilization and low-light capabilities to ensure the best possible video, even in suboptimal conditions.

PRE-EVENT RECORDING

The essential purpose of a body-worn camera system is to get the whole story on record. Interactions with subjects are unpredictable, so often this requires capturing video evidence from before recording is activated. Look for a solution offering pre-event—and post-event—recording capabilities, which means an always-on camera will capture footage from before and after the officer hits the "record" button.

RELIABILITY

It's critical that you invest in durable hardware that can handle the real-world conditions your officers face every day. Look for body-worn systems that are resistant to water, dust and dirt, drops, humidity and other environmental conditions. Don't take ruggedness claims at face value; the device manufacturer should be able to provide you with testing data, as well as failure rates. Solid battery life is important too—a body-worn camera system is useless if it won't last your officer's full shift. And finally, look for a 3-year warranty, which is standard for enterprise-grade hardware and will be priceless in case something should go wrong.

It's critical to select a device that is versatile and designed for the real-life working conditions your officers face in the field.



2 DON'T REINVENT THE WHEEL— MANAGE YOUR EVIDENCE WITH A SINGLE, UNIFIED SYSTEM.

In a 2014 survey, 70 percent of officers reported that their agencies used in-car video evidence systems. Today, that number is likely even higher, and most law enforcement agencies utilize other evidentiary digital media like surveillance video as well. This means that the vast majority of agencies deploying body-worn camera systems will be doing so alongside existing solutions for managing video evidence.

One of the most common complaints from agencies deploying new body-worn camera systems is a lack of compatibility with their existing video evidence platform(s), and the requirement for an all-new, separate video management system. Not only are multiple, standalone systems inherently more costly to deploy and maintain, this also creates operational and administrative drawbacks:

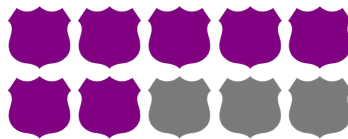
- Increased training requirements
- Increases IT support workload for software updates

- Reduces officer efficiency
- Requires separate maintenance agreements
- May require multiple recurring annual subscriptions

Using multiple, standalone systems for video from body-worn and in-car systems also requires agencies to work with multiple, standalone vendors. In addition to integration issues, it also requires staff to learn two interfaces; manage twice the amount of software bugs, patches and updates; and two sets of End of Life notifications. Your agency may also face twice the risk of the vendor becoming financially unstable and unable to sustain long-term product service and support.

Instead, look for an integrated file management system that comprehensively manages digital video evidence from body-worn camera solutions, as well

70% of officers reported that their agencies used in-car video evidence systems



3 VIDEO FILE STORAGE WILL BE YOUR BIGGEST EXPENSE OVER THE LONG TERM.

Each body-worn camera creates roughly 1 GB of new data for every hour of video shot. Multiply that number by the number of hours worked by the number of officers at your agency—not to mention adding in the amount of video coming from in-car systems or other sources—and you'll quickly realize the importance of a cost-effective storage solution.

For an agency deploying new body-worn camera hardware, the lion's share of long-term costs will actually be related to data storage and not the hardware itself. Wearable video is no smaller in file size than other types of video, and how long the files need to be stored will depend on your department's retention policies. These policies ensure that video is available when you need it, while also ensuring that officers are protected, laws are followed and privacy concerns are addressed.

A law enforcement agency has three approaches to choose from for secure video file storage:



- **100% cloud storage:** Agencies pay a monthly recurring subscription fee to store video evidence in the "cloud," meaning the files are uploaded via the Internet and stored off-site by a hosting company.



- **100% local storage:** Agencies store and manage their video evidence on-site using a central server architecture with local storage servers.

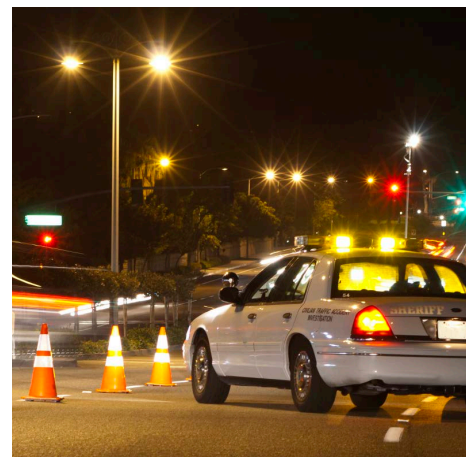


- **Hybrid storage:** A combination of both approaches with video evidence stored on local servers and using cloud storage on an as needed basis, according to departmental policy.

One of the most common complaints from agencies deploying new body-worn camera systems is a lack of compatibility with their existing video evidence platform.

as from in-car video systems and other sources like traditional surveillance video and still photos. Not only does this substantially improve efficiency, it also improves agencies' ability to store critical or potentially court-bound evidence in a manner that meets full chain of evidence custodial requirements from the time of file creation until it is exported from the system for dissemination. When utilized in partnership with law enforcement agencies and courts, an integrated video evidence management system can be used to automatically and securely share evidence with prosecutors, maintaining chain of custody and reducing time required for dissemination for effective case management.

Each body-worn camera creates roughly 1 GB of new data for every hour of video shot.



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THERE IS NO ONE-SIZE-FITS-ALL APPROACH TO VIDEO EVIDENCE STORAGE.

How a public safety agency chooses to store their video is a critical part of the storage architecture design, as it will always be intrinsically related to how the video evidence is captured and managed based on departmental evidence handling procedures and retention policies. Regardless of their chosen storage method, agencies must be able to store critical or potentially court-bound video files in a manner that meets full chain of evidence custodial requirements from the time of file creation until it is exported from the system for dissemination.

Today, the local server-based approach is the most common method for video evidence storage. This method requires a well-designed and controlled network infrastructure on site, and assures the organization that evidence is secure and easily accessible when it's needed. With any server-based storage solution, agencies must ensure secure administrative controls and redundancies are in place.

The primary downside to 100 percent local storage for video evidence is the initial investment it requires for agencies that do not already have the appropriate server architecture in place. With its pay-as-you-go model, cloud-based storage may be an attractive option for these agencies. However attractive the offer may seem, it's critical that organizations compare the true, long-term, total cost of each approach to determine if they're really getting the best possible return on investment.

Before jumping into the cloud for video evidence storage, agencies should ask some basic questions:

- Does the cloud storage solution comply with all applicable local, state and federal regulations?
 - How can you ensure your evidence will be readily available when you need it?
 - Can all your agencies' video evidence—including video from in-car systems or traditional surveillance video—be stored in the same place in a holistic, unified manner?
 - Does the solution offer tools for searching and analyzing video files?
- How does the storage solution enable privacy protection and redaction?
 - What security and maintenance policies are in place? Does the cloud platform meet the FBI's Criminal Justice Information Services (CJIS) requirements?
 - Who owns the data? If you decide to go a different route down the road with a different vendor, can you get your evidence back? If so, how difficult will it be and how much will it cost?

Hybrid solutions, which store sensitive video data at-hand in an on-premises datacenter and other files in the cloud, may be the best approach for agencies seeking the financial benefits of the cloud while eliminating some of the potential risk involved. While a hybrid solution may be more complex, it offers agencies flexibility and scalability for video data storage and management.

How can you ensure your evidence will be readily available when you need it?

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TRANSFERRING DATA WILL BE A KEY CONSIDERATION.

Once an agency has figured out how video will be captured, managed and stored, there is another factor that must be considered, and it is no less important—how these video evidence files will be transferred each day. Offloading HD video data can be cumbersome and time-consuming for both end-users and IT managers, with a potentially high-risk of loss of video data due to badly designed or insufficient

infrastructure. A manageable and stable video data upload platform is also critical to ensure chain of evidence is preserved and policies are strictly followed.

How video files are transferred will largely depend on your choice of body-worn hardware. Some systems utilize docking stations, which offload video using hardline WAN connections. Other systems offer camera hardware with built-in Wi-Fi, eliminating the need for officers to dock their hardware after every shift.

When Wi-Fi is utilized, this may also require additional infrastructure investment, such as improve-

ments to Wi-Fi speed and range, additional wireless access points, or increased Internet bandwidth. This investment must be factored into the overall TCO calculations to represent the true cost of the body-worn deployment. Data security considerations also must be taken into account to ensure that video files are encrypted and secured in transit, and are not accessible to a hacker when being transferred from device to storage platform.

CONCLUSION

Technology for law enforcement is continuously evolving and changing the way officers work. One of the biggest developments of the past several years has been the introduction of body-worn camera systems, which offer significant benefits including helping to improve relationships between law enforcement officers and the communities they serve and protect.

For a cost-effective roll-out of body-worn cameras to your agency, especially if you already utilize in-car video systems, smart strategies for developing a total video evidence management system must be part of the game plan. Agencies should look for solutions that are flexible, work with their existing technology investments, and allow them to manage all their video evidence and data in many forms in a unified, holistic manner.