NICE®

Digital Evidence Management Benchmark Study Results Report


010
110
101

Contents

1. Executive Summary

Digital evidence is accumulating and growing in complexity much more rapidly than police departments can come up with a strategy to manage it. Police departments across the globe are ingesting critical digital evidence that comes in an ever-increasing variety of media formats and ever larger file sizes. While this information provides critical, faster insights into solving crimes and identifying crime patterns, it is often met with slow and outdated processes and infrastructure which was never intended to manage this new generation of multimedia evidence.

NICE Public Safety partnered with the FBI National Academy Associates (FBINAA) to better understand these complexities and conducted a global Digital Evidence Management Benchmark Study. Police executives from 200 police agencies of various sizes and spanning 5 continents took part in the survey. Through their responses they confirmed that a great deal of valuable time is wasted performing manual tasks to manage digital evidence.

The benchmark study also revealed a substantial consensus around the types of evidence most frequently needed for investigations. In spite of this only a fraction of survey respondents have the means to access these evidence items efficiently and consistently. Maintaining the status quo will have even more severe repercussions due to escalating demands on investigators as crimes grow in frequency and complexity, and more evidence flows in from the public. Today, most investigators only have the ability to review 10-20% of the evidence available to them. For instance, many investigators do not listen to 9-1-1 calls or view crime scene photos because it takes time to request and pick up the media. The remaining 80-90% of digital evidence takes up valuable storage space even though it isn't utilized.

There are broader, far-reaching consequences within the department too. Highly skilled individuals from other departments and agencies that support the investigative function also waste time on manual tasks, rather than using their professional qualifications to their fullest potential. Examples of this include forensic crime analysts who spend more than half of their time searching for and converting proprietary CCTV video into universally playable formats, and detectives who spend a third of their time walking or driving evidence from one place to another. Personnel are every agency's greatest resource. Processes they are forced to follow need to be updated to not only save time and money, but also to make their work more productive.

Due to the proliferation of high quality, inexpensive and easy to use home security cameras and camera-equipped smartphones, the public has become an important resource for crowd sourced video. This additional volume of photo and video evidence can have a paralyzing effect on agencies who have no means to store it, and also lack resources to review every piece of evidence in a timely manner. Sometimes, officers will ask citizens to either email the video or alternatively seize the phone for days to perform a forensic extraction. Neither process is ideal due to email file size attachment limitation and inconvenience to the citizen (nobody wants to lose their phone for days). By doing nothing to solve this problem, agencies are risk investigator burnout and reputational ruin. Cases may go unsolved, and people who need to be put behind bars will run free and continue to endanger communities.

2. Key Highlights of Survey Findings

A majority of today's agencies understand they need improved evidence collection, analysis and sharing and are looking for next generation digital evidence management solutions.

The Benchmark Study results affirm that it's time for public safety professionals to take the digital evidence management issues and opportunities seriously. Most survey respondents said they know this is an issue, but the only disparity is their ability to identify a timeline to address it.

52%

Ranked manual handling of evidence on DVDs, CDs, thumb drives and paper case files among their greatest evidence management challenges. Challenges with collecting and preparing CCTV video were the close second.

66%

Acknowledge "driving around to collect CCTV video from homes and businesses" and "copying and burning CDs and DVDs" as the most time-consuming components of the crime investigation process. These two items far exceed everything else in the ranked list of process inefficiencies.

62%

Understand the urgency of the situation and are looking for a solution to their digital evidence management challenges. Nearly a quarter have already allocated resources for the acquisition of Digital Evidence Management technology and associated gains in efficiency and accuracy of investigation processes.

33%

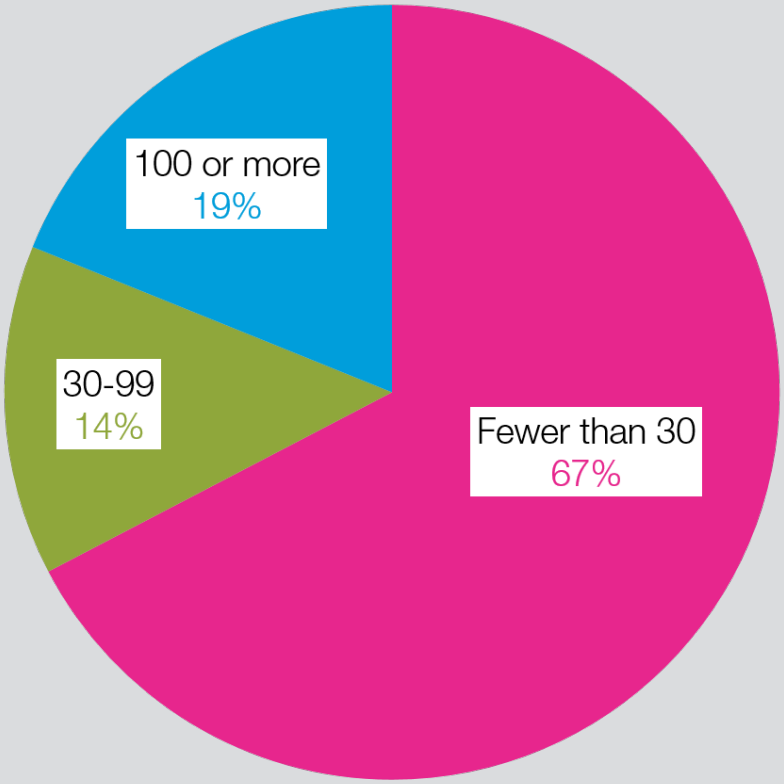
A third of all respondents worry they will miss a crucial piece of digital evidence that should have been shared as part of case disclosure.

3. Benchmark Study Demographics

- 200 respondents from agencies of all sizes
- Representing 5 continents
- 23% from larger agencies, majority of them have over 100 detectives

Question:

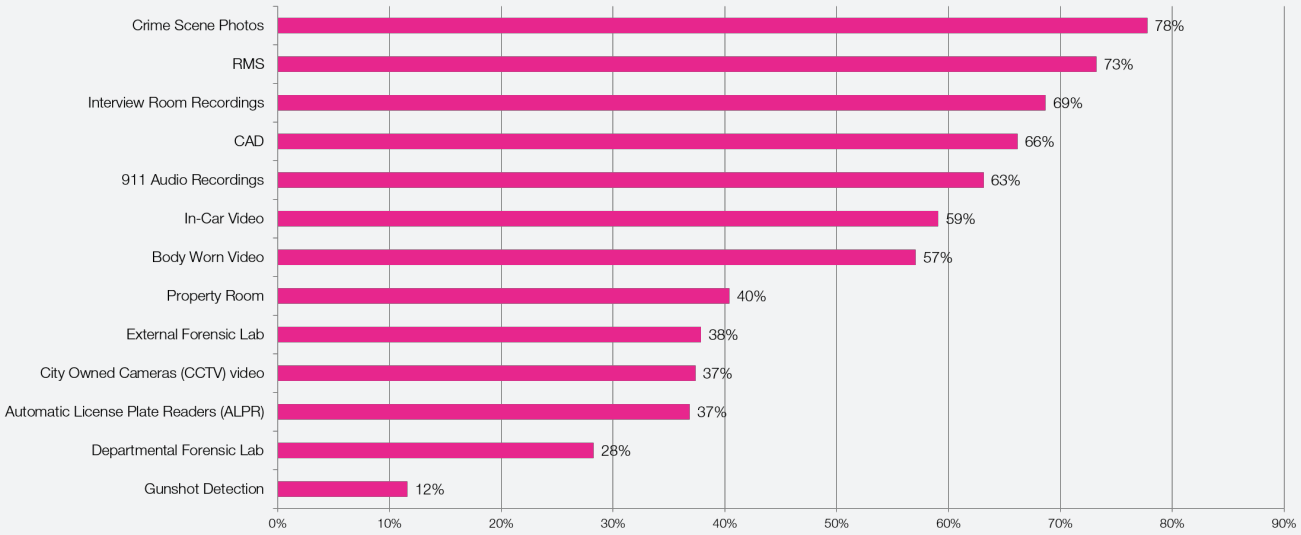
How many detectives are in your department?



4. The Problem of Data Silos

Question:

Which “Data Silos” or various systems do your investigators routinely log into or request information from when working on a case? Select all that apply.



Large Number of Data Silos Impedes Speed and Accuracy of Investigations

Today's crime solving continues to lean on the analytical skill, intuition, memory, and a great amount of time invested by detectives. What has changed is the staggering variety and volume of digital evidence that only continues to increase. Detectives invest more personal bandwidth as they look for new ways to piece together and find connections among the many different types of digital evidence - from crime scene photos, interview room and 911 recordings, video from CCTV, body-worn and in-car cameras, insights from social media posts, to data from ALPR, CAD, RMS and smart devices.

Each type of evidence is typically accessed within its own system, which requires investigators to log in, search, extract, save, and then manually compare information across various silos. This situation severely impacts investigators who must invest at least 4 to 6 hours into gathering evidence to even start the investigation process for each case. This also increases the risk that a crucial piece of evidence will be missed, simply because they don't know where it may be located. Time spent on manual tasks of this nature robs detectives of time they could otherwise spend on investigative work that could help close cases.

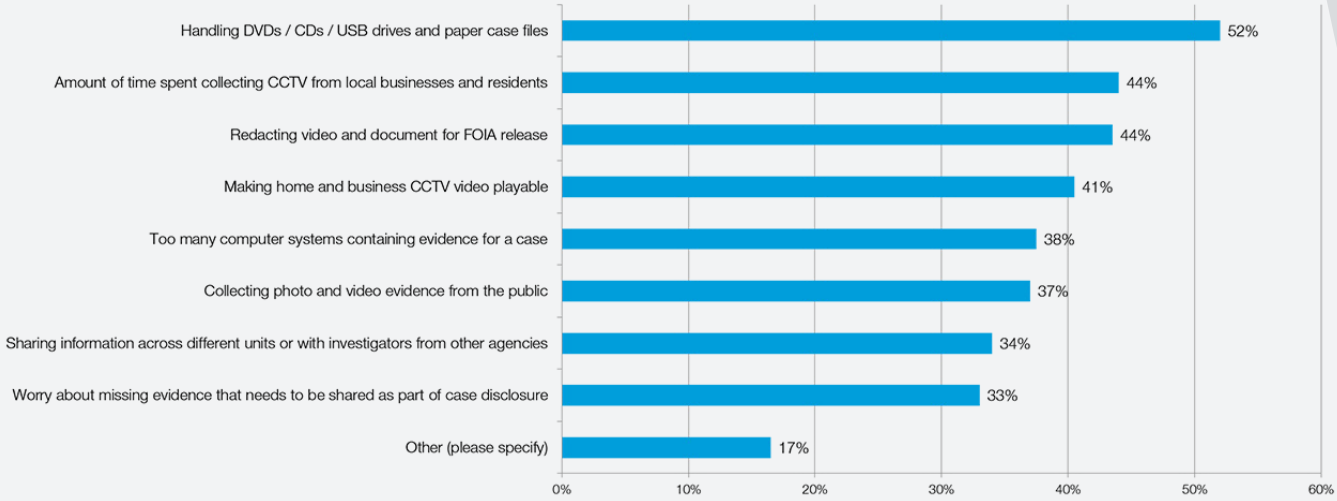
Crime scene photos is the most frequently accessed evidence for investigations (78%), followed by interview room recordings (69%), 911 call recordings (63%), in-car video (59%) and body worn-video (57%), along with records from RMS (73%) and CAD (66%). Frequent logins to multiple systems and interfaces requires patience and skill.

While the survey questions listed 5 more information silos that were rated as secondary and 1 rated as tertiary, there are many others. For example, one agency reported maintaining 40 different systems and technologies (and interfaces) used for gathering, storing, managing, storyboarding and sharing evidence.

5. Top Evidence Management Challenges

Question:

What are the most important evidence management challenges or concerns for your agency? Select all that apply.



Today's Evidence Management is Marred by Built-in Fragmentation

The majority of respondents selected handling removable electronic media (DVDs, CDs, USBs,) and paper case files as their top 3 challenges. This is one of the greatest sources of time and financial losses–removable media and paper files must be created, carried or driven from place to place whether at the evidence collection stage, or or when evidence is delivered to be transcoded into playable, viewable and readable format, or the delivery of evidence packages to attorneys. A medium sized agency reported that it burns an average of 36,000 DVDs per year. The need for various versions of the same video exacerbates this issue as each version requires its own DVD – there is a DVD with a proprietary original video, another with the transcoded version, and still more DVDs with redacted versions.

Agencies that already have means to store and share evidence cost-effectively in cloud-based repositories continue to have challenges with CCTV video. Locating, collecting and playing CCTV video is time consuming, as there is no consistency among cameras owned by businesses and residents. Different proprietary video formats require different codecs to play them back. Perhaps this is why respondents rank the time it takes to collect CCTV video (44%), redact it (44%) and make it playable (41%) all top challenges.

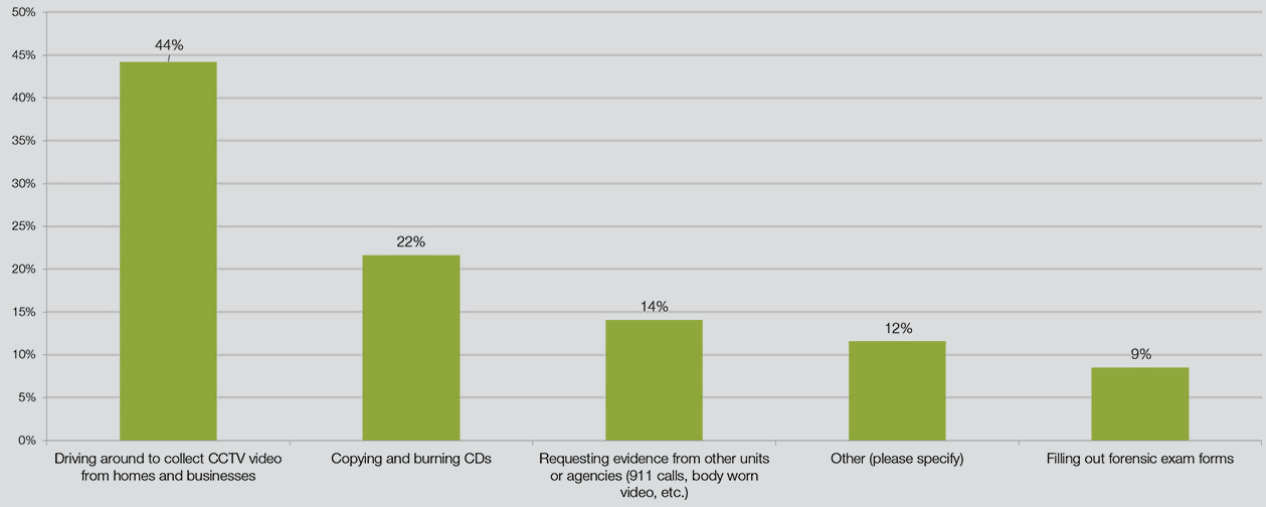
Digital evidence storage is rather challenging as well. 38% of survey respondents agreed that there are too many different places and computers that hold various types of evidence. Agencies also reported that digital evidence storage needs claimed as much as two thirds of their total IT budget. This forces agencies to reserve centralized storage servers for smaller evidence files including shorter videos, and store larger videos elsewhere. It is not surprising that crowdsourcing photo and video evidence from the public leads to yet another file storage challenge for 37% of respondents.

Among the 17% of those who provided a free-form commentary, the majority agreed that evidence storage is a major issue, and not only with respect to capacity. Secure, unified, scalable, well-organized storage of evidence by cases is lacking, and this causes delays and errors in case investigations while also increasing the risk of lost evidence. Detectives are often unaware of all of the available evidence and struggle to comply with the latest evidence disclosure requirements.

6. Time-Consuming Steps in Investigations

Question:

What component of investigating a crime consumes the most time? Select one.



Inefficiency of Investigations is Especially Aggravated by Video Evidence

44% of respondents agreed that time losses caused by driving around to request and collect CCTV video from homes and businesses is the greatest area of waste and frustration, especially since detectives are required to do much of the legwork themselves. Once the CCTV video is collected, it is typically burned on CDs or DVDs (22% of respondents listed this as their greatest time waster) and driven to various other units for conversion to a playable format, followed by trips to designated areas or appointed specialists for video redaction. Several agencies also commented that each time a new piece of evidence is added to a case, the case has to be recreated and digitally pieced together again, until the digital media is finally boxed along with other evidence files and driven to attorneys. This can bloat the annual cost of CDs and DVDs into hundreds of thousands of dollars, which nearly equates the annual subscription cost of of a Digital Evidence Management solution.

While some agencies allow emailing of evidence between approved parties, video files tend to be too large for email and are thereby excluded from this method of sharing. Several agencies that implemented on-line evidence storage systems reported that they are required to limit file sizes for uploads into those repositories and/or convert all files to standard formats manually prior to each upload. This often limits the use of such storage systems to documents and selected photographs. Video continues to be stored separately on digital media in a variety of places.

Besides the obvious inconvenience, time loss, and inability to comply with the latest legal requirements to rapidly produce evidence on request, this method of evidence storage unfortunately also increases the risk of evidence loss which can result in fines and reputational damage. Being able to request evidence electronically (without the need to travel or fill out and submit a variety of forms with each request) would be a major improvement.

14% of respondents stated that timeframes involved in requesting evidence from other units or agencies (9-1-1 calls, body worn video, etc.) consume the most time in the investigative process., while 12% chose to offer free-form responses. Respondents also offered insights into the difficulties they have with video evidence, including::

- Analyzing video and validating criminal and non-criminal claims or finding details that matter to the investigation
- Finding links between CCTV and body worn video and other types of evidence, as well as between cases
- Challenges dealing with large file sizes which impact servers, computer systems and storage media
- Difficulty convincing businesses and individuals who own CCTV cameras to cooperate in a timely manner – to extract video and burn it on a CD, DVD or USB drive
- Meaningfully archiving digital evidence, especially video

7. Digital Evidence Management Must-Haves

Question:

What capabilities would you most like to have if your agency purchased a Digital Evidence Management solution in the future?

Of the 200 police agencies that took part in the survey, the majority agreed on 8 capabilities that would have the greatest positive impact on their ability to manage digital evidence efficiently and effectively. Additional 6 capabilities were named by at least 10 respondents. Examples from the 'top 8' list:

- "One Stop Shop" with better compatibility and access to all evidence, not many software logins
- Improved speed and ease of access to all evidence, including documents, videos, etc.
- The ability to view and play various video and photo formats, including large video files that are otherwise time-consuming to convert, play and share

A complete list is available on request as part of a free consultation

8. Conclusion

The results of this survey confirm that law enforcement agencies are acutely aware of the fact that the volume and variety of digital evidence is growing at a rate that exceeds their readiness to deal with it. Most of today's investigators are ill equipped to effectively manage the influx of evidence from ever more sources - CCTV and bodyworn cameras, ALPR, CAD, RMS, interview room and 911 recordings, social media, smart devices and in-car video, and a wide variety of crowdsourced evidence.

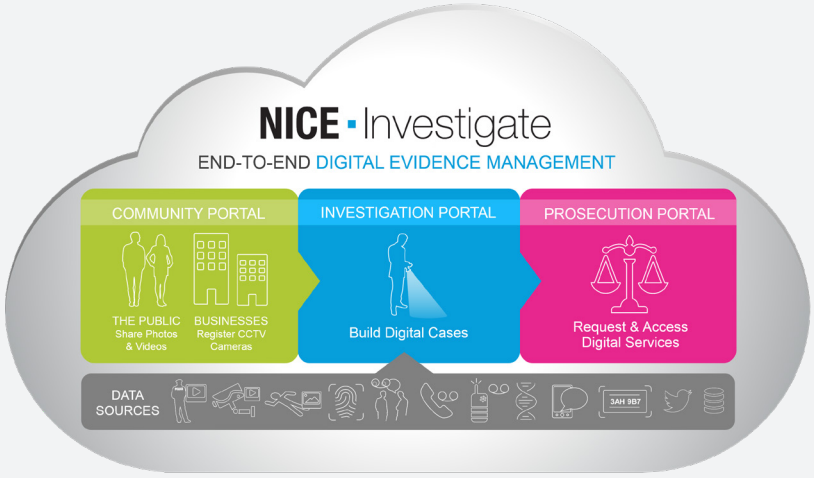
CCTV has long been important to investigations. But the lack of industry standards in CCTV has turned proper recovery of digital video evidence into a long research project that can slow down and even impede investigations.

The siloed nature of digital evidence exacerbates these challenges – investigators have to negotiate different processes, computers, logins, and interfaces which not only adds time to the investigative process but also contributes to the likelihood that crucial evidence might be overlooked.

Yet, investigators know that every investigation is a race against time. Leads can grow cold, and in certain cases, time can make the difference between putting offenders behind bars or leaving them free to commit more crimes.

Paving the Way Forward

NICE is helping law enforcement agencies overcome these challenges. By providing a single system for the investigators to do their work, and automating the processes around collecting, analyzing and sharing digital evidence, NICE's next-generation Digital Evidence Management solution (NICE Investigate) provides significant time and cost savings.



By automatically correlating and pulling relevant 911 calls, photos, CCTV video, body-worn video, and other media and data into cases, NICE Investigate can eliminate long wait times for evidence, and hours wasted phoning, emailing and filling out forms, as well as driving from one location to another to obtain or deliver evidence on CDs, DVDs and USB drives.

NICE Investigate provides a solution to the CCTV challenge as well, by automatically transcoding video into a standard format that can be played on any desktop, laptop, tablet, or smartphone. Investigators can now rapidly access video and all other evidence from virtually any location.

But the NICE Investigate solution isn't just a 'container' for digital evidence. It also provides built-in tools and workflows like integrated maps, timelines and analytics that auto-recommend connected evidence, which can streamline and augment the investigative process. NICE Investigate gives investigators proven tools to easily put into context any amount of evidence within and even between cases, based on time sequence, location, names, objects, and a host of other parameters.

Law enforcement agencies that use NICE Investigate report increased efficiency, effectiveness, and better outcomes of investigations, including improved success rates of earlier charging decisions and guilty pleas, handling and closing more cases faster, and and much better job satisfaction for investigators.

About NICE Public Safety

NICE Public Safety solutions integrate and put into context information from many sources to help emergency communications centers and investigation departments reconstruct and understand the who, what, when, where and why of an incident. NICE Inform, the industryleading digital evidence management (DEM) solution, gives emergency communications centers better insight into how to continuously improve their operations. NICE Investigate is the leading open, digital policing solution that automates and expedites the entire digital investigation process, helping to increase case clearance rates. Over 3,000 organizations worldwide rely on NICE public safety solutions.

www.nice.com/public-safety

About NICE

NICE (NASDAQ: NICE) is the worldwide leader of software solutions that deliver strategic insights by capturing and analyzing mass quantities of structured and unstructured data in real time from multiple sources, including, phone calls, mobile apps, emails, chat, social media, and video. NICE solutions enable organizations to take the Next-Best-Action to improve customer experience and business results, ensure compliance, fight financial crime, and safeguard people and assets. NICE solutions are used by over 25,000 organizations in more than 150 countries, including over 80 of the Fortune 100 companies.

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