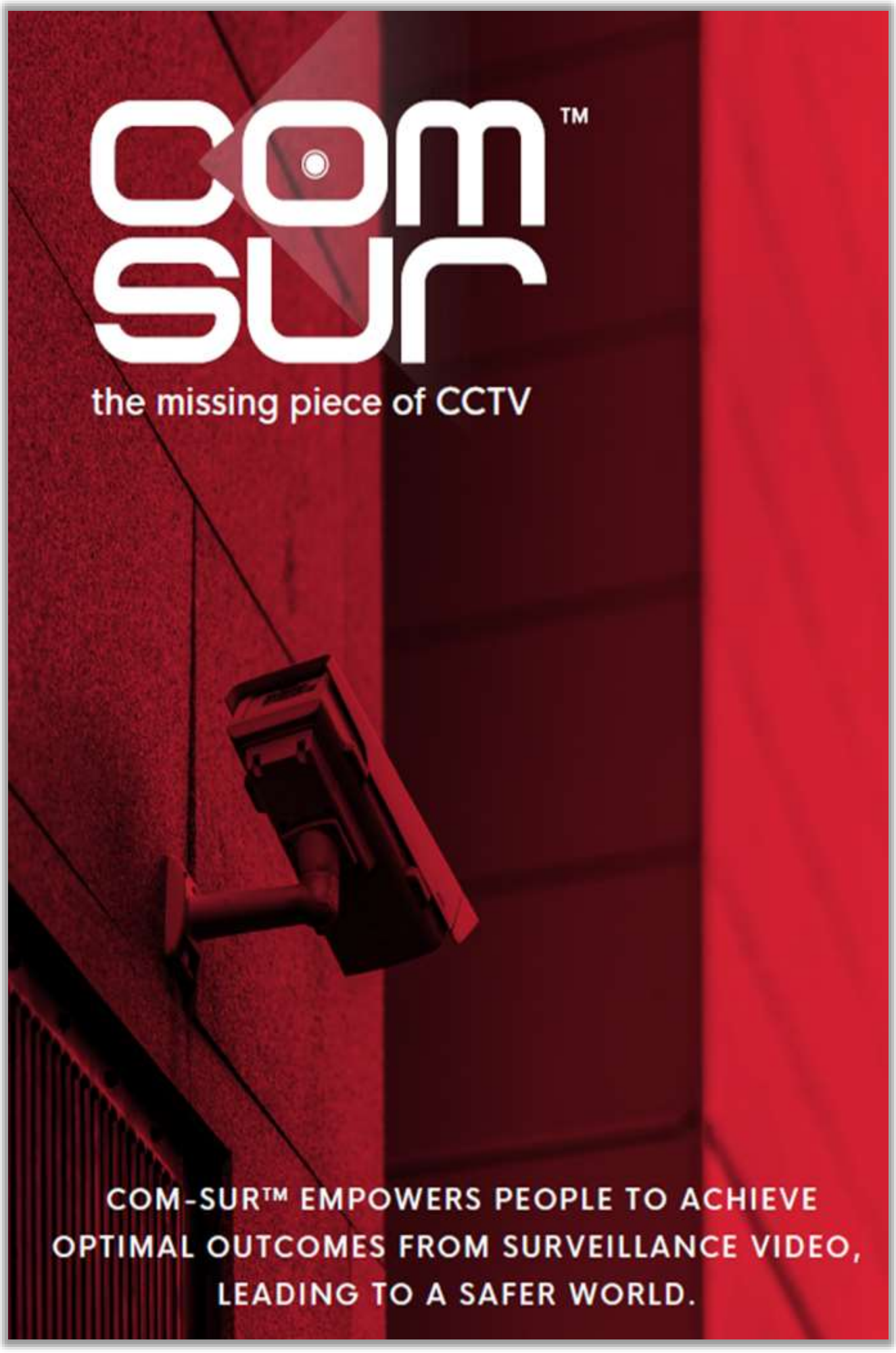
COM SUR™
the missing piece of CCTV
COM-SUR™ EMPOWERS PEOPLE TO ACHIEVE
OPTIMAL OUTCOMES FROM SURVEILLANCE VIDEO,
LEADING TO A SAFER WORLD.

UTILITY VALUE OF COM-SUR™ FOR CUSTOMS AND BORDER PROTECTION AGENCIES

WELCOME

AUDIT HOURS OF FOOTAGE IN MINUTES FIND OUT HOW COM-SUR WILL HELP

CCTV and other forms of video surveillance are commonly used by customs and border protection agencies world over, but footage is often only reviewed reactively. Our company realized this problem early-on and has developed the world's only CCTV video footage auditing software that encourages daily auditing (hours in minutes) of CCTV footage, filling the gap for a complete "workflow". The software works with existing cameras and VMS, regardless of type/brand, and provides a standardized approach for intelligent incident reporting. Our software also offers exceptional investigative capabilities.

'COM-SUR' – THE WORLD'S ONLY CCTV/ SURVEILLANCE VIDEO FOOTAGE AUDITING, SMART BACKUP, AND STANDARDIZED INTELLIGENT INCIDENT REPORTING SOFTWARE – THE MISSING PIECE OF CCTV/ SURVEILLANCE VIDEO

COM-SUR is the world's only CCTV/ surveillance video footage auditing, smart backup, and standardized intelligent incident reporting software that serves as a complete workflow and force multiplier. It helps audit 24 hours of footage in minutes, reduces data size, creates standardized intelligent reports, and delivers business intelligence. COM-SUR helps unlock hidden information in CCTV/ surveillance video footage and enables people to gain actionable intelligence, improve homeland security, prevent crime and losses, identify and mitigate threats and hazards, and improve operational efficiency. It empowers people to gain new jobs as CCTV/surveillance video footage auditors and start new businesses of auditing video footage. Like MS Office, COM-SUR is an enabler that makes it easy to work with CCTV and other surveillance cameras in a standardized way, leading to better decision-making. It also offers exceptional investigative capabilities.

HOW COM-SUR SMARTLY REDUCES 'VIDEO' STORAGE SIZE

COM-SUR employs an innovative approach to smartly reduce the amount of video to be audited and consequently the storage size of videos. Regardless of the video's frame rate, COM-SUR captures a single screenshot of the consolidated 'moment' of 'that' one second, when the I, P, and B frames come together. This method significantly reduces data size without sacrificing vital information. It goes without saying that when multiple cameras are displayed in a grid view, say 4x4, the storage size is further reduced since all the cameras are captured as a single image. Since no suggestion is being made to replace the actual video with screenshots, COM-SUR acts as a wonderful supportive technology both to audit (review) just 86400 frames representing 24 hours and reducing the data size at the same time.

CHALLENGES FACED BY CUSTOMS AND BORDER PROTECTION AGENCIES

1. Unauthorized border crossings:

One of the primary challenges is the detection and prevention of unauthorized border crossings. This includes individuals attempting to enter the country without proper documentation or engaging in illegal activities such as smuggling contraband or trafficking.

2. Drug and contraband smuggling:

Customs and border protection agencies are tasked with intercepting and preventing the smuggling of drugs, weapons, counterfeit goods, and other contraband across borders.

3. Human trafficking and smuggling:

Customs and border protection agencies are responsible for combating human trafficking and smuggling operations. This involves identifying and intercepting individuals being trafficked or smuggled across borders, often in dangerous and exploitative conditions.

4. Terrorism and national security:

Customs and border protection agencies play a crucial role in protecting national security by identifying potential terrorists or individuals with links to terrorist organizations attempting to enter the country. They need to work closely with intelligence agencies and employ various security measures to mitigate this threat.

5. Infrastructure security:

Customs and border protection agencies must ensure the security of critical infrastructure such as ports, airports, and border crossings. This involves safeguarding against threats such as sabotage, and other disruptions that may compromise the integrity of these facilities.

6. Workforce safety:

Personnel of customs and border protection agencies face various risks to their personal safety while carrying out their duties. They may encounter hostile individuals, encounter dangerous environments, or be exposed to hazardous substances during inspections or operations.

7. Insider threats:

Customs and border protection agencies have to deal with insider threats from disgruntled employees or even unwitting staff who fail to follow proper security and safety measures.

8. Humongous growth of surveillance video:

The exponential growth of surveillance cameras has resulted in an

unprecedented surge in surveillance video. Effectively managing this data has become a daunting challenge due to the massive storage capacity required, especially considering the prolonged retention periods necessary for security, incident investigation, or legal purposes. Furthermore, the prevalence of high-resolution video with increasing megapixels compounds the storage demands, making efficient data management an urgent priority for organizations grappling with the immense volume of surveillance footage.

COVID-19 PANDEMIC

The pandemic severely impacted customs and border protection agencies worldwide. Customs and border protection agencies had to enforce strict border restrictions and travel bans laid down by their governments, which included screening travellers, denying entry to non-essential travellers, and implementing quarantine or isolation protocols. Further, the pandemic posed challenges in maintaining adequate staffing levels due to illness, quarantine requirements, and travel restrictions, leading to customs and border protection agencies having to manage their resources efficiently to ensure the continuity of critical operations. Also, customs and border protection agencies had to remain vigilant to prevent the smuggling of counterfeit medical supplies, substandard PPE, illegal drugs, and other illicit goods related to the pandemic. Guidelines were issued to prevent the spread of COVID-19, but outbreaks still occurred.

HOW DO CUSTOMS AND BORDER PROTECTION AGENCIES USE VIDEO SURVEILLANCE

1. Border monitoring:

Video cameras are strategically positioned along border areas to monitor and detect any unauthorized border crossings or suspicious activities. This helps in preventing illegal immigration, drug trafficking, smuggling, and other border-related crimes.

2. Port and airport security:

Video surveillance systems are installed at ports, airports, and other points of entry to monitor the movement of people, vehicles, and goods. It helps in identifying potential security threats, verifying the authenticity of travel documents, and enhancing overall security within these facilities.

3. Cargo and freight inspection:

Video surveillance is utilized to monitor and record the inspection process of cargo and freight shipments. It helps in ensuring compliance with customs regulations, identifying any discrepancies or security risks, and maintaining an audit trail for accountability purposes.

4. Surveillance of restricted areas:

Customs and border protection agencies use video surveillance to monitor and secure restricted areas within ports, airports, and other sensitive facilities. This includes control rooms, customs inspection areas, secure storage facilities, and other high-security zones.

5. Incident investigation:

Video footage from surveillance cameras is invaluable in investigating security incidents, breaches, or suspicious activities. It provides visual evidence that can be reviewed and analyzed to understand the sequence of events,

identify individuals involved, and gather necessary information for law enforcement purposes.

6. Support for operational decision-making:

Real-time video feeds and recorded footage assist border protection officers in making informed operational decisions. It provides situational awareness, helps assess threats or risks, and enables effective response and deployment of resources.

USE OF VIDEO SURVEILLANCE AT FACILITIES OF CUSTOMS AND BORDER PROTECTION AGENCIES

Most facilities of customs and border protection agencies have video surveillance covering the following areas:

- Entry and exit points
- Border checkpoints
- Surveillance towers and observation posts
- Vehicle inspection areas (inspection lanes, cargo inspection bays, vehicle checkpoints)
- Passenger processing areas (immigration halls, passport control, customs clearance areas)
- Baggage and cargo handling areas
- Storage areas and evidence rooms
- Administrative and operational areas

Further, the concerned stakeholders at customs and border protection agencies generally need to review and analyse recorded video footage from time to time for investigating incidents and/or accidents, and other issues in order to corroborate evidence.

USE OF THERMAL CAMERAS

Customs and border protection agencies often use thermal cameras as part of their surveillance and security systems. Thermal cameras detect and capture infrared radiation emitted by objects and living beings, allowing them to create images based on heat signatures rather than visible light. Here are some common purposes for which customs and border protection agencies use thermal cameras:

1. Border surveillance:

Thermal cameras are effective in detecting human presence, even in low-light or adverse weather conditions. They can help identify individuals crossing borders illegally, including smugglers or unauthorized migrants, by detecting their body heat signatures.

2. Perimeter security:

Thermal cameras are used to monitor and secure the perimeter of customs and border protection facilities. They can detect intrusions and suspicious activities, such as attempts to breach fences or cross restricted areas, even in darkness or low visibility.

3. Detection of hidden or concealed objects:

Thermal cameras can reveal objects that may be hidden or concealed under clothing, vehicles, or cargo. They are valuable tools for identifying potential threats like concealed weapons, contraband, or dangerous

substances during border inspections or security checks.

4. Search and rescue operations:

Thermal cameras aid in search and rescue missions, particularly in locating individuals in distress or missing persons. By detecting body heat signatures, thermal cameras can help locate individuals in challenging environments, such as dense forests, rugged terrains, or at sea.

5. Monitoring critical infrastructure:

Thermal cameras are used to monitor and protect critical infrastructure, such as bridges, tunnels, airports, and ports. They can identify potential threats like overheating equipment, electrical malfunctions, or unauthorized access to sensitive areas.

6. Wildlife and environmental monitoring:

Thermal cameras are employed for wildlife conservation and environmental monitoring along borders. They can help track animal movements, detect poaching activities, identify endangered species, and monitor ecosystem health.

USE OF DRONES

Drones are increasingly being used by customs and border protection agencies for various purposes. Here are some common applications:

1. Border surveillance:

Drones equipped with high-resolution cameras and thermal imaging technology can be used to monitor and patrol border areas. They provide aerial surveillance capabilities, allowing agencies to detect illegal border crossings, monitor remote or inaccessible areas, and identify potential threats in real-time.

2. Smuggling detection:

Drones are employed to detect and deter smuggling activities, such as drug trafficking, human smuggling, and contraband transportation. They can cover large areas quickly and gather visual evidence of illegal activities, aiding law enforcement efforts.

3. Rapid response and situational awareness:

Drones provide rapid response capabilities, allowing customs and border protection agencies to quickly deploy them to specific locations for situational assessment during security incidents or natural disasters. They provide real-time aerial views, helping agencies make informed decisions and allocate resources effectively.

4. Infrastructure monitoring:

Drones can be used to inspect and monitor critical infrastructure along borders, such as fences, barriers, and surveillance systems. They enable agencies to identify any breaches, damages, or vulnerabilities, ensuring the integrity and functionality of border security infrastructure.

5. Environmental monitoring:

Drones equipped with sensors can assist in monitoring environmental factors along borders, such as detecting wildfires,

monitoring pollution levels, or tracking wildlife migration patterns. This data can contribute to environmental conservation efforts and enhance situational awareness.

6. Search and rescue operations:

In remote or challenging terrains, drones can aid in search and rescue operations. They can cover large areas quickly, provide aerial views of the search area, and assist in locating missing persons or survivors in emergency situations.

7. Training and simulation:

Drones are used for training purposes to simulate various scenarios and enhance the skills of customs and border protection personnel. They allow trainees to practice response tactics, surveillance techniques, and airspace management in a controlled environment.

USE OF BODY WORN CAMERAS

Some customs and border protection agencies use body worn cameras as part of their operations. Here are some common applications:

1. Evidence collection:

Body worn cameras provide a firsthand and objective record of interactions and incidents between customs and border protection officers and individuals they encounter.
The footage captured by these cameras can serve as valuable evidence in investigations, legal proceedings, or disciplinary actions.

2. Officer safety and accountability:

Body worn cameras promote accountability and transparency by capturing the actions and behaviour of customs and border protection officers. Knowing they are being recorded can encourage officers to adhere to proper protocols, de-escalate conflicts, and maintain professional conduct. The presence of body worn cameras can also help deter aggressive behavior from individuals involved in encounters with officers.

3. Training and performance evaluation:

Body worn camera footage can be used for training purposes, allowing customs and border protection agencies to review real-life scenarios and identify areas for improvement. Supervisors can assess the performance of officers, provide constructive feedback, and enhance training programs based on the recorded interactions.

4. Documentation and incident review:

Body worn cameras enable customs and border protection agencies to document encounters, inspections, searches, and other operational activities accurately.
The recorded footage can be reviewed later to ensure adherence to protocols, identify potential procedural errors, or provide context in case of complaints or disputes.

5. Public transparency and trust:

The use of body worn cameras promotes transparency and helps build public trust in customs and border protection agencies.

The availability of video footage can provide an unbiased account of events, enhancing transparency and accountability in interactions between officers and the public.

LIVE MONITORING – CHALLENGES

Customs and border protection agencies have a dedicated control room with operators, set up for live monitoring of CCTV cameras. However, live monitoring comes with its own set of challenges of video blindness, poor attention span, boredom, operator bias, false alerts, and so on.

Moreover, these cameras continuously capture and record humungous amounts of video data. It therefore becomes a daunting task for the operators to review and analyse this data whenever the need arises. Thus, it may be noted that benefits from video surveillance systems can accrue only when they are used optimally, suggestions for which are enumerated further on, in this document.

COMPLIANCE - GENERAL

Conformity or compliance in any organization means adherence to laws and/or rules and regulations, various standards, as well as data storage and security requirements as laid down by government bodies, governing bodies of the respective industry, or the management of the organization. When an organization complies with the requirements mandated by government and/or governing bodies, then it is termed as 'regulatory compliance' which enables the organization to run in a legal and safe manner.

COMPLIANCE - AUDITS

Several organizations carry out compliance audits on a regular basis to avoid the potential consequences of non-compliance.
A compliance audit examines how well an organization adheres to compliance requirements. Some organizations use video surveillance to monitor compliance issues and audit recorded video footage from time to time for investigating and preventing compliance issues. Auditing video provides actionable insights on the level of compliance within the organization.

AUTOMATED SOFTWARE – WHY THEY WILL NOT WORK IN ISOLATION

In the wake of the Christchurch shooting incident, several high-profile places of worship considered deploying gun detection technology. However, there are concerns about its efficacy, since it may not be able to detect all types of weapons, or the perpetrator could still create damage before being detected. Similarly, automated systems like video analytics, AI/ML can only detect what they have been programmed for. What about the rest? Again, these technologies are prone to triggering huge amounts of false alarms. Also, since the permutation combinations of exceptions can be vast and varied, it becomes almost impossible to automate every kind of exception. Facial recognition technology also raises ethical and privacy concerns, and has been found to produce inaccurate results, especially for certain ethnic groups. Therefore, experts suggest that while automated technologies will continue to grow, human intervention and intelligence will still be necessary to verify alerts and ensure their efficacy.

"CCTV AND OTHER FORMS OF VIDEO SURVEILLANCE ARE NOT ENOUGH – WE MAKE IT WORK FOR YOU"

While it is not being suggested that optimal usage of video surveillance can cure all issues, several issues of the following kind can be addressed by doing just a little 'more' with respect to making the optimal use of video surveillance systems:

- Infiltration attempts/enemy movements
- Trafficking and smuggling activities
- Drug related offences
- Recces/suspicious movements/activities
- Insider job/security lapses
- Authority misconduct
- Unauthorized/unlawful activities/visitors
- Loss/fraud/theft
- Intrusions, especially by animals
- Compliance issues
- Inattentive staff (e.g. guard sleeping)
- Unruly staff/customers/outside workers /security guards
- Unclaimed/unattended objects
- Health and safety issues
- Issues with female staff/passengers
- Cameras/recorder malfunctions

So, what is the 'more' that needs to be done?

1) AUDIT CCTV AND OTHER SURVEILLANCE VIDEO FOOTAGE DAILY AS A STANDARD OPERATING PROCEDURE

'Auditing' means 'seeing' what the cameras 'saw'. Auditing of CCTV and other surveillance video footage should be done daily (continuous investigation) to identify potential issues and threats. Auditing is a dedicated and systematic process that helps address challenges related to live monitoring and alert-based systems. Auditing helps in evaluating analyzing incidents to improve existing policies, procedures, and processes. Concerned personnel should be trained to become video footage auditors, and the audit teams should be rotated to avoid complacency /collusion. Daily auditing of CCTV and other surveillance video footage can also help in adhering to the principles of Kaizen and TQM for business improvement.

2) DOCUMENT AUDIT FINDINGS/INCIDENTS

Audit findings/incidents should be documented in a standardized template to find the root cause to prevent future recurrences. Historical data of such findings/incidents can reveal patterns that can help take better informed corrective and preventive action. If all customs and border protection agencies report incidents in a standardized template, relevant authorities can derive business intelligence from the data and take action for the collective benefit of all stakeholders.

3) ENSURE DISASTER RECOVERY OF CCTV AND OTHER SURVEILLANCE VIDEO FOOTAGE – LIKE A 'BLACKBOX'.

CCTV and other surveillance video footage must be stored at multiple locations in order to ensure that even if the recorder/storage device is stolen, destroyed or tampered with the data is never lost. Further, any backed-up data must easily be searchable and retrievable; else, it is going to be a nightmare finding the relevant video.

4) DISPLAY DYNAMIC INFORMATION AT RELEVANT PLACES

Document and display details of information that is dynamic in nature in relevant areas. For example:

1. List of authorized personnel deployed at the customs or border protection agency.

2. List of potential suspects /miscreants /missing persons/who have been trafficked/wish to gain illegal entry into a country, likely to visit the premises of the customs or border protection agency as well as at border checkpoints (a 'Watch out' list).

5) USE A POWERFUL NEW SIGNAGE

"WE AUDIT CCTV VIDEO FOOTAGE EVERYDAY".

One size, one color, one powerful message. Across the nation.

DE-CENTRALIZED SURVEILLANCE + CENTRALIZED SURVEILLANCE = OPTIMAL RESULTS

Organizations with multiple locations struggle with centralized video surveillance due to infrastructure cost, internet bandwidth, and operator limitations. De-centralized surveillance offers higher accountability at each location and better situational awareness, leading to more chances of discovering exceptions.

CONCLUSION

"You see, but you do not observe" is a quote by Sherlock Holmes in A Scandal in Bohemia (1891, written by Sir Arthur Conan Doyle). COM-SUR makes 'observation' far effortless and effectual leading to superior results.

"Cameras don't lie" - but how will you know unless you 'see' what the cameras 'saw'? Audit video - why suffer!

Get award-winning COM-SUR now. Don't wait for things to go wrong!