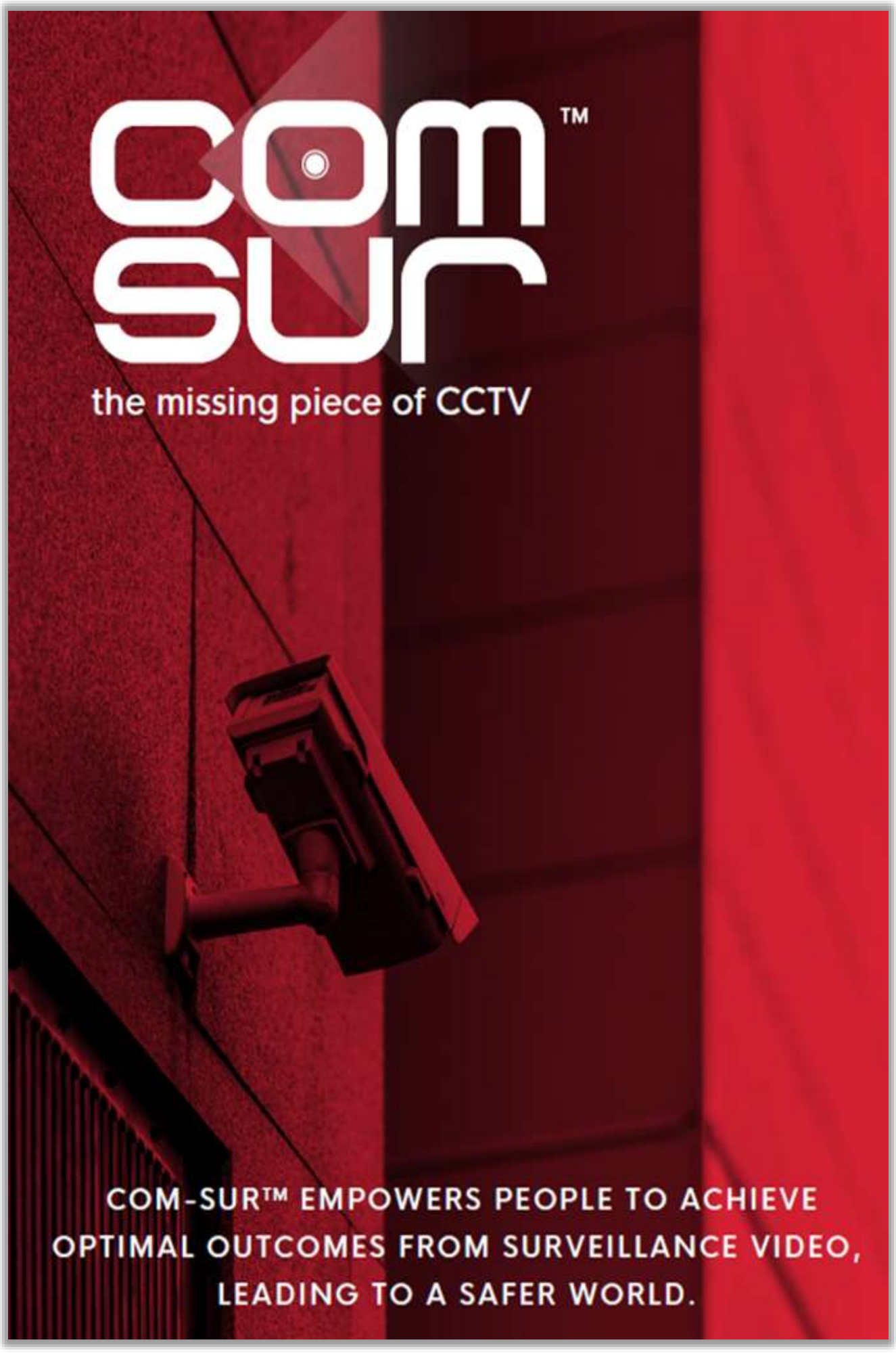
COM SUR™
the missing piece of CCTV
COM-SUR™ EMPOWERS PEOPLE TO ACHIEVE
OPTIMAL OUTCOMES FROM SURVEILLANCE VIDEO,
LEADING TO A SAFER WORLD.

UTILITY VALUE OF COM-SUR™ FOR THE POWER SECTOR

WELCOME

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

CCTV and other forms of video surveillance are commonly used in the power sector, 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.

POWER SECTOR CHALLENGES

1. Unauthorized access:

Power companies need to ensure that only authorized personnel are allowed inside the premises, and that visitors do not have access to restricted areas.

2. Sabotage and vandalism:

Power facilities are susceptible to acts of sabotage, vandalism, or malicious damage, which can disrupt power generation, transmission, or distribution and cause widespread outages or equipment failures.

3. Human errors:

Power companies are susceptible to human errors which can cause power outages and disrupt the power grid. These entail incorrect handling of equipment, improper maintenance, and so on.

4. Theft and tampering:

Theft of valuable equipment or materials, such as copper wiring, can occur at power substations or construction sites. Additionally, unauthorized tampering with power equipment or meters can lead to safety hazards, revenue loss, or inaccurate billing.

5. Environmental hazards:

The power sector is susceptible to environmental hazards, such as air pollution, water pollution, and climate change, which can impact the health and safety of workers and the public, as well as the reliability of power generation and transmission.

6. Employee safety:

The power sector involves hazardous operations and work environments, such as high-voltage areas, confined spaces, or exposure to chemicals. Ensuring the safety of employees and contractors is a critical challenge faced by the industry.

7. Compliance issues:

The power sector must comply with various regulatory requirements related to physical security, safety standards, environmental protection, and data privacy. Meeting these obligations can be challenging due to the evolving regulatory landscape and the need for ongoing adherence.

8. Insider threats:

Power companies have to deal with insider threats from disgruntled employees or even unwitting staff who fail to follow proper security and safety measures.

9. 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 the operations of power companies worldwide. Owing to restrictions/lockdowns, there was a disruption in the supply chain which led to delays in the delivery of equipment and materials required for power generation and transmission.
The operations of dependent industries were also impacted, resulting in huge losses.
Guidelines were issued to prevent the spread of COVID-19, but outbreaks still occurred.

USE OF VIDEO SURVEILLANCE AT POWER COMPANIES

Most power companies have video surveillance covering the following areas:

- Entry and exit points
- Power plants
- Substations
- Control rooms
- Transmission lines
- Production areas
- Storage facilities
- Perimeter fences
- Offices
- Other critical areas that house expensive equipment and material

Further, the concerned stakeholders at power companies analyse recorded CCTV video footage from time to time for investigating incidents and/or accidents, and other issues in order to corroborate evidence as well as assisting Police/other Law Enforcement Agencies.

USING DRONES FOR REMOTE VISUAL INSPECTION

Power companies carry out remote visual inspection (RVI) using drones to inspect their power lines, transformers, and other equipment. RVI enables power companies to monitor and detect issues remotely, reducing the need for manual inspections and improving operational efficiency. The drones capture high-quality video footage that can be analyzed to identify potential issues such as damage or wear and tear. RVI can help power companies to identify potential problems before they result in outages or other disruptions, improving system reliability and reducing maintenance costs.

THERMAL IMAGING CAMERAS

Power companies use thermal imaging cameras to detect heat signatures and abnormal temperatures. They are useful in identifying

equipment that is overheating or in detecting intruders in the dark.

LIVE MONITORING – CHALLENGES

Several power companies have a dedicated control room with operators, set up for live monitoring of CCTV as well as drones. 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:

- Operational issues

- Vandalism and sabotage
- Human errors

- Accidents/causes of potential accidents

- Potential causes of fires

- Tampering with power equipment

- Compliance issues

- Health and safety issues

- Loss/theft

- Recces/suspicious movements /activities

- Insider job/security lapses

- Unauthorized/unlawful activities/visitors

- Unclaimed/unattended objects

- Staff negligence

- Inattentive staff (e.g. guard sleeping)

- Issues with female staff

- 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 power companies report incidents in a standardized template, relevant authorities can derive business intelligence from the data and take action for the collective benefit of the power sector.

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 staff.

2. List of authorized security personnel deployed at the power company.

3. List of habitual offenders/suspects likely to visit the power company's premises (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!