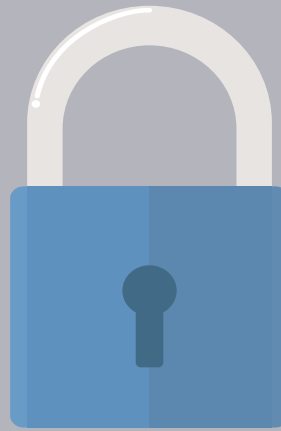


Manage Privacy in the Age of Video Analytics



Address Privacy Concerns to Reap the Benefits of Video Intelligence

Video has the capacity to be a rich Internet of things (IoT) data source that can be used to drive operational efficiencies and improve public safety. While organizations can harness the potential of video data in their operations, failing to address privacy concerns can lead to risk and legal liabilities. They need to ensure that their video solutions can deliver useful and actionable insights while still providing the right amount of privacy protection.

Video has long been used in the protection of people and property, but it remains an underutilized form of data. One of the primary reasons for this is privacy and data governance concerns, along with the difficulty of data storage and management due to high volumes and speed requirements. Video has the capacity to be one of the most powerful forms of IoT data: It could be used to help improve efficiencies, enhance customer experiences, and increase public safety by providing rich operational, business and security intelligence. Advancements in computer vision and machine learning have made it possible for organizations to tap video's full potential, turning stagnant surveillance footage into dynamic IoT data.

Video provides a wealth of insights and alerts that can help organizations like airports make data-driven decisions in real time, to ensure their passengers are safe and get to their destinations on time. Retailers can use it to generate the same powerful customer insights from their brick-and-mortar stores as they do from their websites. Cities can use video data to optimize their response time and policies for a variety of use cases, including improving traffic and parking management, increasing public safety, and providing insight into the real return on investment (ROI) of publicly funded projects.

Privacy Concerns Have Slowed Video's Potential

Despite its many potential benefits to improve business and society, the proliferation of video technologies being used in public places, hospitals and schools has raised concerns about personal privacy. These issues arise due to the perceived or actual collection of personally identifiable information (PII), and concerns about how that data will be used. Privacy concerns have historically slowed or blocked video technology deployments and the application of video analytics to support a wide array of potential operational, business and public safety benefits.

Governments and public agencies, as well as other highly regulated industries, such as energy, healthcare and banking, must implement comprehensive security systems to protect the data of citizens, patients and customers. At the same time, they must adhere to strict privacy protocols designed to protect the privacy of people and their PII. Failing to do so leads to risk and legal liabilities. There is a need to effectively address these concerns using technology. Governments, cities, law enforcement, transportation agencies and businesses need solutions that can unleash the full potential of their video security and monitoring environments, without compromising the privacy of their constituents.

Automate Privacy Protection

Most video analytics solutions, if they even offer privacy protection, provide a basic solution that simply pixelates faces. This leaves all of a subject's clothing and body unmasked, which can easily reveal the identity of the person. Solutions like Hitachi Video Analytics (HVA) software from Hitachi Vantara automatically detect people, pixelate full bodies and provide color blocking to mask entire figures. This approach provides additional privacy protection.

Because the same computer that is pixelating human figures is also supporting other analytics, you are still able to count people and vehicles and detect queues. You can send alerts if restricted areas are crossed into or if someone enters a dangerous area, such as a passenger falling onto subway tracks. This metadata can be used for analysis and alerts, without exposing PII.

If video footage needs to be used for public safety or investigative purposes, authorized users must log into the system with a secure ID card and PIN code to gain access to the original nonpixelated footage and files, enabling auditability and helping them become GDPR¹ ready. Organizations need to track and record all user access and viewing activity to ensure that the system is being used ethically and that there is a chain of custody to discourage evidence misuse, or, in extreme cases, provide evidence to support prosecution of violations.

Real-Time, 3D Insights While Protecting Privacy

In some instances, insights can provide valuable benefits, but need to be pulled from areas that have privacy sensitivities such as hospitals or schools. In these cases and potentially others, it can make more sense to deploy new 3D LiDAR technology instead of video. LiDAR is similar to radar and sonar but uses lasers instead of radio or sound. LiDAR measures the time of flight (ToF) of laser points to generate three-dimensional, real-time and continuous information about the physical world.

LiDAR is particularly well suited for situations like monitoring hospital facilities, schools where minors are present, and other areas where people may object to video monitoring. This technology uses laser "point clouds," not natural light, and the resolution is not small enough to identify a specific person. Therefore, no PII is collected about the individual identity of people within its field of view.

It enables GDPR-ready data gathering in public or private spaces. As a result, it can support many more smart spaces for a variety of organizations, especially when combined with video analytics and big data analytics for a comprehensive solution.



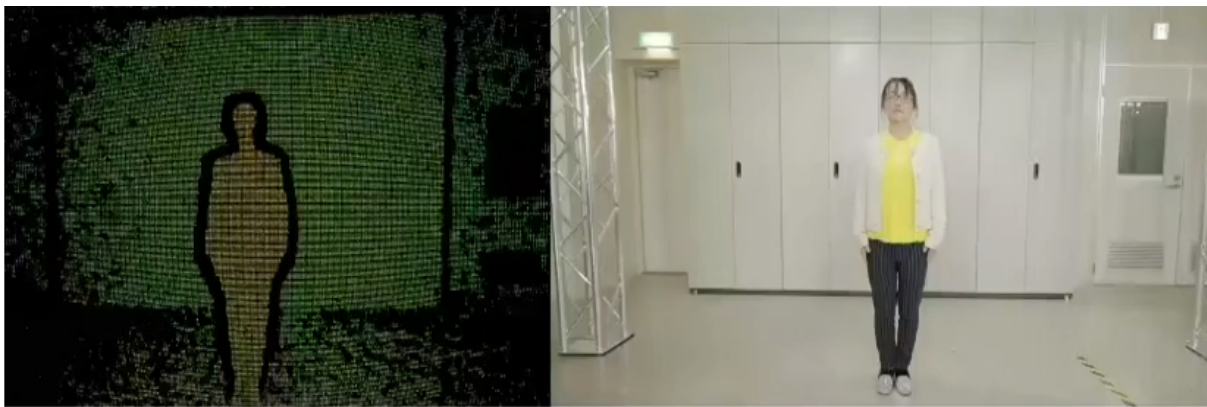
Sample screen shot shows use of Hitachi Video Analytics' Privacy Protector feature: HVA automatically detects and masks people's images with full body pixelation and/or color masking.

Technology and People Form the Solution

Technology vendors should seek to provide greater value by building solutions with the privacy and protection of their customers, passengers or constituents in mind. Organizations need to work with partners who can deliver real innovation that helps to protect private information, thereby increasing the potential of their video data and technologies.

In addition, people and political systems also play a critical role in protecting individual privacy and civil liberties. Governments and companies have long possessed tools that, if misused, could lead to negative outcomes. It is our collective responsibility to ensure that our governments, businesses and society use technology responsibly and for good purposes. We all have a responsibility to play our role in making sure this is the case. At Hitachi Vantara, we take privacy seriously and build privacy protection offerings into our products and road maps.

Video is just another tool in our business or collective societal toolbox. It helps us to uncover immensely valuable insights that can make our cities, businesses, public spaces and services safer, smarter and better at what they do. The combination of technology and policy protections provide us with an incredible opportunity to transform our world into one that is safer, more sustainable and prosperous. We invite our customers, partners and stakeholders to join Hitachi Vantara in doing our part to make this world possible.



With 3D LiDAR, personally identifiable information is not collected. This approach makes it perfect for situations where video monitoring is not appropriate due to privacy concerns.

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Hitachi Vantara provides intelligent IoT and data-driven solutions that help organizations build smart spaces that are safer and more secure, while providing actionable insights that drive operational improvements. Learn more about how your organization can become safer and smarter with Hitachi Vantara solutions.

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