milestone

Normal service resumed?

How video technology supports our new reality

MAKE THE
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FACING OUR NEW REALITY

Business leaders are busy getting their houses in order - investing, planning and adapting to the new challenges we now encounter and opportunities now available. Make no mistake. After COVID-19 our cities, workplaces, homes, social spaces and shops may never be the same again.

As we move purposefully into recovery phases, in the shadow of renewed lockdown, the time has come to start anew - with considered investment in the right technology and processes to drive industries forward.

This practical and insightful guide will look at how the landscape has changed, both in the video technology space as well as other tools, and how leaders in transport, logistics, retail, and safe cities can make the most of the coming years.

HOW WE ARRIVED HERE

Early in 2020, the world as we knew it was overturned. Social distancing, contact tracing, face masks and more have become part and parcel of our daily lives.

When our work and social lives were disrupted, a host of technologies came to the fore to help us maintain our various connections, allow us to connect to workplaces, and protect our loved ones. Indeed, without such tools as video conferencing and instant messengers, the Coronavirus crisis would have been even tougher to handle for most.

The role of video management

The video management industry found itself well placed to spring into action in the immediate aftermath of the global lockdown. Providing tools to ensure public safety, secure buildings remotely, and check adherence to social distancing rules.

Now, as we move into the next phase, the focus falls on reassuring people that they are safe in their workplaces, going to the shops, and travelling around their cities. Again, video management will play a key role in reducing the potential for further waves of infection, and ensuring organisations can get back to work. They will be relying on video technology to manage overcrowding, ensure social distancing and public health measures are followed, provide touch-free access to buildings and at present, there are several threats keeping people informed as they move around a space.

Opportunities to welcome

The Coronavirus crisis highlighted how, with a strong enough stimulus, processes can rapidly change. It has underpinned the need for organisations to be agile and robust, to streamline procedures and act (where needed) almost instantly. This fostered innovation, with digital transformation accelerated by two years in just two months.

The onus is now on leaders to decide what innovations made during the crisis should be kept. For instance, if working from home became a possibility due to lockdown, should this practice be maintained because of the benefits it continues to offer? And if so, what are the implications for training, development and the promotion of a working culture? Processes and technologies implemented quickly over the past months should be reviewed to understand what can be kept for a competitive advantage and what has been more of a hindrance.

Challenges on the horizon

At present, several threats keep leaders up at night, including:

- Concerns about a new wave of infection and how to keep the workforce safe as it returns to the business.

- Navigating the economic downturn by building greater resilience, continuity and agility into operations.

- Re-engaging with customers and pursuing new revenue streams through innovation.

Because of this, 75% of Chief Financial Officers (CFOs) plan to invest more in workplace safety measures such as thermal detection, COVID testing, face masks and hand sanitisers. Video analytics is also being deployed as a way to monitor and proactively manage footfall, inform track-and-trace efforts, and enforce social distancing.

Infection control

Some factories are also using [AI-based technology](#) to assess contamination risk and reduce the spread of Coronavirus, salmonella, listeria and other pathogens. Video analytics can detect people wearing PPE (Personal Protective Equipment) and, if integrated with an intercom or digital display system, can remind non-wearers to don appropriate PPE. Post-COVID, this can go beyond the wearing of face masks to also include safety helmets, high-visibility clothing, eye protection and safety footwear.

Tracking shipments

Meanwhile, using ACCR consistently through the recovery process will reduce the likelihood of shipments going missing or being stolen and provide early warning of potential delays or other issues. Given the dominance of the just-in-time supply chain, predicting and mitigating possible delays can make or break a bottom-line, at a time where economic downturns are threatening even the most solvent businesses.

Unauthorised exits flagged by the ACCR system can be immediately responded to, with the system operating 24 hours a day, 7 days a week to provide constant peace of mind. Security personnel also don't have to be present on-site, but instead remain in a central control room safely monitoring activities across multiple sites.

Practical lessons to take away

Recovery hinges on remaining resilient and robust against future changes, both with the supply chain itself, as well as technology.

Safety will remain a key focus going forward, with infection control, contamination risk and adherence to PPE and safety measures.

Using video analytics, logistics leaders can streamline operations, ensure on-time deliveries, track shipments, reduce missing shipments and theft, and provide peace of mind to workers that safe practices are being monitored and enforced.

INDUSTRY SPOTLIGHT:
TRANSPORT & LOGISTICS

The transport and logistics industry faced numerous challenges at the height of the Coronavirus crisis.

Challenges within logistics

Increased demand on some supply chains (namely healthcare and food) needed to be immediately responded to, especially given the panic-buying occurring in many regions. Sales of hand sanitiser in the UK, for example, rose by 255% in February as the COVID outbreak (and concerns about it) grew. Likewise, toilet paper sales were up 60% year-on-year for the week ending March 8th 2020.

Supermarkets were forced to ration some items, such as longlife milk and pasta, to deter stockpiling. In response, retailers and suppliers reduced the ranges of product on offer, to focus on keeping the nation fed and essential supply chains moving.

Some logistics companies, previously catering to low-demand areas such as restaurants, shifted their operations to run emergency COVID supply chains for supermarkets. Consultancy SCALA set-up an emergency working group to help coordinate the supply chains for FMCG and retail companies feeling the strain of the crisis.

With pressure on retailers and manufacturers to keep shelves stocked, understanding where shipments were in the supply chain, tracking deliveries and knowing when to expect stock became critical. Likewise, as competition laws were relaxed to allow supermarkets and distributors to share their stock levels, distribution centres and delivery vans, accurate tracking via ACCR (Automatic Container Code Recognition), RFID (Radio-frequency identification) and other labelling solutions were vital.

Throughout the pandemic, ecommerce transactions grew exponentially. In the UK, ecommerce in February 2020, one month prior to lockdown, accounted for 19% of all retail sales, according to the Office for National Statistics. By May 2020 it had hit 33%. Similar increases were seen across Northern Europe. This increase is resulting in a shortage of warehouse space and increased rents for e-retailers to store goods. Similarly, in Finland, S Group experienced a high volume of new traffic to its online platform foodie.fi and in response, is building a further 12 e-commerce sites over the next months to meet the new demand and increase order fulfillment.

MOVING FORWARD IN THE NEW LOGISTICS REALITY

For logistics leaders, the next stages of recovery will involve ensuring supply chains are resilient against future risks, keeping workers protected, and reducing the likelihood of contamination or infection spread.

Continuity and opening
Using technology to secure warehouses and protect workers will be crucial to staying open, maintaining worker morale (and reassurance), and also showing insurers and regulators that all potential risk of infection has been mitigated. Safe practices such as regular hand washing and wearing face masks must be enforced.

Reducing crowding
In workplaces such as factories and warehouses, video analytics can flag overcrowded areas and direct people to stop gathering or take alternative routes if one walkway is too busy. It can also measure the distance between workers to ensure they are staying the minimum distance of two metres (or one metre with additional risk mitigation such as wearing a face mask).

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CHALLENGES WITHIN TRANSPORT

Simultaneously, transport chiefs faced the challenge of ensuring only essential travel occurred throughout the country.

Non-essential travel out of local regions was banned, with local police forces using ANPR (Automatic Number Plate Recognition) to identify out-of-town vehicles and issue fines. In just one bank holiday weekend, the ANPR system used by the UK's Sussex Police (which oversees popular tourist spot Brighton) picked up over 100 infringements. This included one couple who had made a 150-mile round trip to visit the beach.

Monitoring road traffic conditions as lockdown restrictions eased was also important, to maintain social distancing restrictions and forewarn of potential bottlenecks. Transport areas, such as railway stations, also had to monitor for high footfall and potential overcrowding as restrictions were lifted.

With overseas travel limited, the UK experienced a 'staycation' boom with almost a quarter (24.9%) of adults stating that they preferred to holiday in the country until a vaccine is developed. Beach areas such as Bournemouth and Brighton, in particular, had to issue red warnings and control visitor numbers with road and area closures. Similarly, Norwegians were encouraged to holiday in the country during Summer 2020, with the Government advising against all non-essential travel until October 2020.

Moreover, monitoring for other violations such as dangerous driving had to continue regardless of the pandemic. Video surveillance and analytics helped authorities monitor conditions via a central control room at a safe distance for employees.

MOVING FORWARD IN THE NEW TRANSPORT REALITY

The transport sector will remain at the sharp end of post-COVID challenges as the country recovers and further travel is allowed.

Transport requirements

UK Government guidelines currently state, amongst other requirements, that transport companies:

- Enable passengers and people working on the transport network to maintain a two metres distance or one metre with suitable risk mitigations.
- Regularly advise staff and passengers on ways to keep their distance from other people - with a clear and single approach to social distancing for all workers and passengers.
- Reducing the number of people that each person has contact with when working within the transport network, either by using fixed teams, partnering or cohorting.
- Ensure face coverings are worn and that handwashing is occurring regularly (and that there is access to hand sanitiser).
- Minimise indoor interactions where possible.
- Re-organise passenger flows.
- Increase surface cleaning.
- Advise people to avoid loud talking, shouting or singing.

Concurrently, there is the continued pressure to avoid overcrowding and to control passenger and traffic flows as people begin to travel to their workplaces again, go on day trips, and take holidays.

Monitoring footfall and traffic

Video analytics can help transport companies to monitor footfall and traffic in roads and other areas such as rail stations, to ensure social distancing can happen and reduce potential overcrowding in popular destinations.

In busy road areas, video can monitor for high-traffic and open or close lanes in response. It can also open up lanes solely for emergency vehicles - and even integrate with a hospital's (or other location) access control system to reduce emergency response times.

Improved cleaning

Identifying high-footfall areas around a station can also help cleaning teams understand what surfaces require more regular sanitisation. A laser focus on hygiene standards (and possible future pandemics) is likely to define the 'COVID generation' long after the immediate risks pass. Regular, heightened, sanitisation of public areas is likely to be expected for decades.

Education and redirection

When integrated with digital signage or tannoy systems, people can be redirected to less busy areas or reminded of Government public health guidelines if a breach in social distancing is identified. Automation can also be used in conjunction with video analytics, to direct people and vehicles to the correct areas for travel, or to automatically alert staff of emergency situations. Long-term, such systems can help reduce overcrowding in areas and improve the passenger/road-user experience during busy periods such as commuting.

"Businesses must learn about new innovations in video technology, to plan for the future."

**Elias Bechara
Managing Director, 6SS**

Practical lessons to take away

Transport leaders face multiple challenges over the coming years in controlling crowds, redirecting pedestrian and traffic flows, and ensuring regular sanisation.

However, many of the processes used in the short-term can have long-term benefits in making traffic flows more efficient, improving the passenger experience and keeping concourses safe.

Video insights can feed into crowd control, provide greater oversight of traffic conditions to inform decision-making, and help emergency responses.

INDUSTRY SPOTLIGHT:
RETAIL

The retail industry faced a mixed bag, with some retailers facing sharp rises in demand - both in terms of products and a shift to online - and others responding to the shutdown of all non-essential physical retail stores.

Challenges within retail

Groceries, DIY and gardening equipment, flowers and greeting card sales all reportedly experienced high demand during the crisis. Fashion and footwear brands found themselves facing large declines in sales. The UK's Kingfisher, owner of Screwfix and B&Q DIY stores, reported a 225% year-on-year growth in sales during June 2020. However, Swedish consumers report feeling uncertain about the future and therefore cutting back on all shopping except for groceries and non-food child products.

High-demand retailers

For retailers facing huge upswings in demand, the focus was placed on securing and streamlining the supply chain to ensure stock levels remained consistent, if not high. Again, ACCR became integral to these efforts, automatically monitoring shipments to keep them on schedule, reduce missing packages or theft, and proactively forewarn of any delays or issues.

Managing footfall within stores was also a priority, with in-store customer numbers limited and queuing systems set-up outside of stores to reduce the likelihood of Coronavirus transmission. In-store social distancing markers, floor tape, barriers, and digital signage was used to remind customers to maintain a safe distance from others. Video analytics helped retailers to monitor adherence and reduce the likelihood of unsafe crowding or bottlenecks in-store. Body-worn cameras, used by security personnel and staff managing outdoor queueing, reduced the likelihood of difficult situations when customers were prompted to wait outside, adhere to social distancing or wear a face mask.

Contactless processes became vital, both as ways to enter premises and also pay for goods. In the UK, contactless payment limits were increased from £30 to £45 in response. Contactless payments across the Nordics, which is already renowned for using the least cash in the world, soared by 12% in the first four months of lockdown.

Stores also implemented enhanced cleaning practices with greater frequency and provided hand sanitizer stations for customers and staff. Swedish retailers Willys and ICA installed plexiglass screens to protect checkout staff. Video analytics helped to alert cleaning teams to areas that needed sanitisation and restock of hand sanitizer or soap supplies.

Low-demand retailers

Meanwhile, stores that were forced to close their physical locations for months required remote security. Both to secure unattended properties across the country, and also to keep security teams safe by locating them off-site in a socially distanced, central control room.

Advances in video surveillance technology and video management systems (VMS) meant that most tasks, such as monitoring a site or carrying out maintenance and upgrades, could be done remotely during the crisis. This reduced the risk to security staff as well as installers. Remote maintenance and upgrades helped to keep systems running efficiently and securely. Automatic alerts for potential trespassing, burglary, fire, or other emergency situations helped security teams remain off-site but still connected to all happenings onsite.
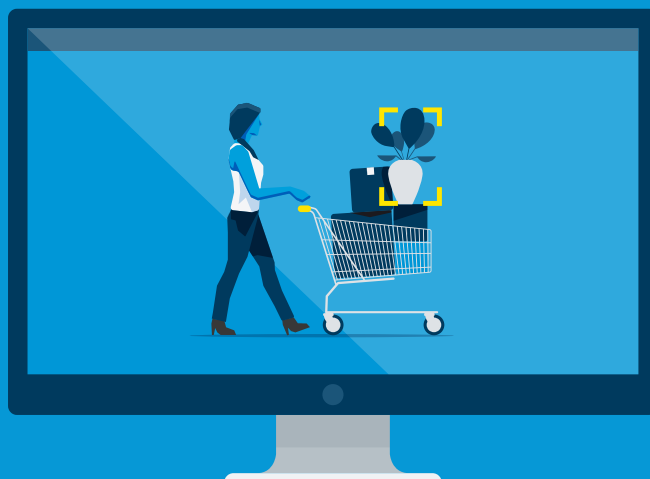
"Intelligent insights, video analytics and Industry 4.0 are transforming retail operations."

Rudolf Rohr
CEO, Barox

Normal service resumed?

MOVING FORWARD IN THE NEW RETAIL REALITY

As more retailers re-open their physical locations, adherence to social distancing is critical to reduce the likelihood of an increase in transmission and future closing of locations. Likewise, retailers must consider ways to remain responsive and agile to an ever changing situation.

Reassuring customers

Simultaneously, footfall remains lower than expected, down 39% year-on-year in the four weeks beginning 5th July 2020 across all UK retail destinations. Retailers must, therefore, find ways to reassure customers that visiting their retail stores is as safe as possible.

This can be achieved in several ways. Notably, in having a clear and communicated policy on social distancing and tactics to keep staff and shoppers safe onsite - with the right technology investments to support this. In Michigan, for example, shopping centre owners are experimenting with a technology that estimates the number of people in a shop and advises them of areas to avoid via an app.

Improving in-store experiences

Many customers are also reporting dissatisfaction with the new in-store experience, or example 40% of people who have returned to UK shops find that shopping in-store is less enjoyable compared to pre-COVID times. In particular, they express frustration at having to queue to enter a store, following a one-way system, and waiting longer at checkout.

To guarantee that this does not become a long-term trend that damages the sector, retailers must invest in technology that streamlines this process. Namely, using video analytics to monitor busy periods, redirect people where needed, and alert store managers to the need for more checkouts. It can also help managers understand the flow of people throughout a premises, to proactively set-up route diversions or extra walkways when needed. Such applications can help retailers manage social distancing now, but also improve the in-store experience in the future.

Contact tracing

Video analytics will also be required in the near-term to carry out rapid track-and-trace and quickly alert customers and staff if they need to self isolate. Where people counting is required, using video to identify occupancy levels in a shop will prevent a staff member having to stand at a doorway, at risk of infection, manually counting.

Touch-free access

A VMS integrated with access control systems can also help with touch-free entry to a premises. Customers can simply walk through automatic doors, staff can enter or exit restricted areas based on their credentials, and doors along a route can automatically open. In conjunction with contactless payments, this reduces the touchpoints during the in-store experience - and can also speed up a customer's journey from shopping to checkout.

"Retailers must find ways to reassure customers that visiting their retail stores is as safe as possible."

Practical lessons to take away

Retailers must use technology to reassure customers that physical stores are safe to visit in the immediate aftermath of the Coronavirus and recover lost footfall.

The in-store experience has been found wanting. Video solutions are well-placed to aid with the main customer dissatisfaction areas of long queues and difficult navigation around a store. Retailers must prioritise the post-COVID in-store experience to ensure this short-term dissatisfaction does not deter customers in the long run.

Technology must also reduce the risk of infection to staff, through reducing touch points or flagging areas for extra sanitisation. This has an added long-term benefit, with advanced cleaning and contactless processes in place, there is less likelihood of staff falling sick with other infectious diseases such as the common cold.

INDUSTRY SPOTLIGHT: SAFE CITIES

Globally, governments and public authorities faced a significant challenge in controlling and monitoring the spread of the coronavirus. The concept of 'safe cities' took on a whole new context in the wake of the pandemic, encompassing not just public law, order and safety, but also health measures and infection control.

Challenges within safe cities

Authorities had to work to keep cities and citizens safe, with pressure on resources and a need to additionally ensure the safety of staff. Social distancing breaches had to be handled quickly to reduce the risk of local flare-ups and shutdowns, and authorities also had to find ways to ensure quarantine rules were followed by those infected with Coronavirus.

Government departments, such as the South Korean Ministry of Land, Infrastructure and Transport, turned to smart city technology to maintain infection control, trace possible contacts of infected patients, and ensure social distancing rules were being followed. Cameras and other sensors fed data into South Korea's Smart City Data Hub, to aid with contact tracing and keep COVID case numbers relatively low.

Meanwhile, a number of European countries such as Austria, Belgium, Denmark, France, Germany, Italy, Switzerland and Spain have been collaborating on a centralised contact tracing tool called the "Pan-European Privacy-Preserving Proximity Tracing" (PEPP-PT).

Video analytics has also been helping with crowd control and redirecting traffic or foot flow into less busy areas. Integrated with digital signage, using such systems can reduce the need for on-the-ground traffic control and can automatically change redirections based on real-time video data.

Sensor data was also used to monitor pedestrian traffic during lockdown, to measure the impact of the UK Government's social distancing communications. The project, from the University of Newcastle, found that pedestrian traffic fell by 95% compared to the usual annual average in the city of Newcastle. ANPR data showed that vehicle traffic declined by half. These insights provide feedback on communication measures in the city and, if adherence was found to be too low, could inform changes to the communication strategy.

The same research team also produced models that were able to measure the distance between pedestrians walking in public spaces. Combined with other video analytics tools to identify gathering or overcrowding, this can be used to redirect people to safer spaces or routes and remind them of social distancing rules.

MOVING FORWARD IN THE NEW SAFE CITY REALITY

As lockdown eases, there is an urgent need for clear oversight of traffic within, and moving into, a city.

Tracking city-to-city spread

People are travelling across the country for work, social and holiday reasons. This increases the likelihood of transmission from one region to another. Simultaneously, cities that aren't controlling their Coronavirus outbreaks as effectively as others are finding themselves subject to local lockdowns with associated economic costs.

Ensuring ongoing safety

Controlling the spread of infection throughout a city, until a vaccine or cure is found, is therefore vital. Moreover, this is a highly changeable situation and authorities need to remain vigilant, agile and responsive to all likelihoods.

Investing in the right technology to underpin this will make all the difference to citizen safety. As illustrated, video analytics can support social distancing measures, as well as ongoing public safety such as reducing anti-social behaviour and crime.

"There is a shift from safe cities, to healthier and more intelligent cities."

Diego Sáenz Herce
Global Strategic Alliance Manager, Herta

Practical lessons to take away

Governments and local authorities have a duty of care to ensure their citizens remain safe from infection as they move throughout their city - this also extends to general safety and crime prevention.

Video analytics can help in the short-term by making sure people adhere to social distancing rules, and that they are aware of changes to the guidance through digital signage or other alerts. Long-term, video analytics can help with reducing crime and anti-social behaviour.

Using crowd and traffic control solutions to alert to gatherings and breaches of social distancing will improve infection control now, as well as help with policing and redirections in the future once immediate risks have passed.

OTHER CONSIDERATIONS

The examples discussed in this report highlight the need for leaders to invest in the right technology - tools that align with your short and long-term needs and goals.

This technology must also be futureproofed ready for incoming changes, emerging needs and new trends. Where possible, using open platforms that allow integration with third-parties will help to build agility and future proofing into your technology stack.

Investing in the cloud

Many of the advances mentioned wouldn't be possible without the cloud. Having a cloud infrastructure lays the foundations to forward-thinking innovations like automation, advanced data analysis, and smart cities. Indeed, the adoption of cloud technology has increased because of the Coronavirus crisis, with 51% of business and IT leaders now planning to move more applications to the cloud. If your organisation isn't already experimenting with the cloud, now is the time to start.

Data protection and privacy

With video technology becoming more widespread because of the crisis, concerns over the use and security of video data must be addressed. GDPR-ready technology is a must, to reassure people that their data is secure and protected, being processed and used ethically, and will remain private. There is a need to balance privacy with the need to contain the pandemic in the short-term, and reinforce public safety in the long-term.

Milestone Systems also advocates for technology that is used in a way that respects the Copenhagen Letter, a 2017 initiative that seeks to put people back in control of technology and that calls for technology to be developed and used in a responsible way.

"GDPR-ready technology is a must."

milestone

Next steps

The innovations and technologies discovered during the crisis hold benefits now and in the coming years. As we come to terms with the new reality, it is time to move forward with the technology and processes that have worked for your people. Take stock of the lessons learned in responding and remaining agile. Look to protect and safeguard your organisation and people now. But also have an eye on what may continue into the future, to give you a competitive edge through greater efficiency and oversight, improve experiences and safety, and more data-driven decision-making.

Find out more by **visiting here.**

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