2024 Trends to Watch: Physical Security and Critical Communications

Physical Security and Critical Communications

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“With multimodal application, interactions with video feeds using natural language “chat bot” interfaces, ushering in a more intuitive and context-aware experience.”

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Introduction

- This white paper explores the transformative forces set to define the upcoming year, offering a comprehensive analysis of the key shifts poised to impact the physical security and critical communications industries.
- From the continued integration of artificial intelligence and machine learning to the unfolding dynamics of voice to data-focused critical communications, we delve into the forefront of innovation.
- As we navigate an era defined by rapid change, this document serves as a compass, guiding stakeholders, businesses, and individuals through the shifting landscape of 2024.
- In this year's Trends for 2024 white paper, we discuss:
  - Physical and cybersecurity convergence
  - The impact of Generative AI on video analytics
  - Large Model Applications in Intelligent Transportation
  - Unveiling the power of body worn camera metadata
  - The evolution of mobile credentialing to mobile access solutions
  - Radar playing a key role in the perimeter security market
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Coming out of 2023, Omdia is positive on the outlook for 2024. Optimism surrounding new evolutions of transformative technologies, markets, and technology capabilities will continuously drive innovation.

If you would like to speak with one of our analysts on any of the topics covered in this paper or to discuss our service offerings, please contact us.

Oliver Philippou, Senior Research Manager – Physical Security Technologies

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Physical and cybersecurity convergence

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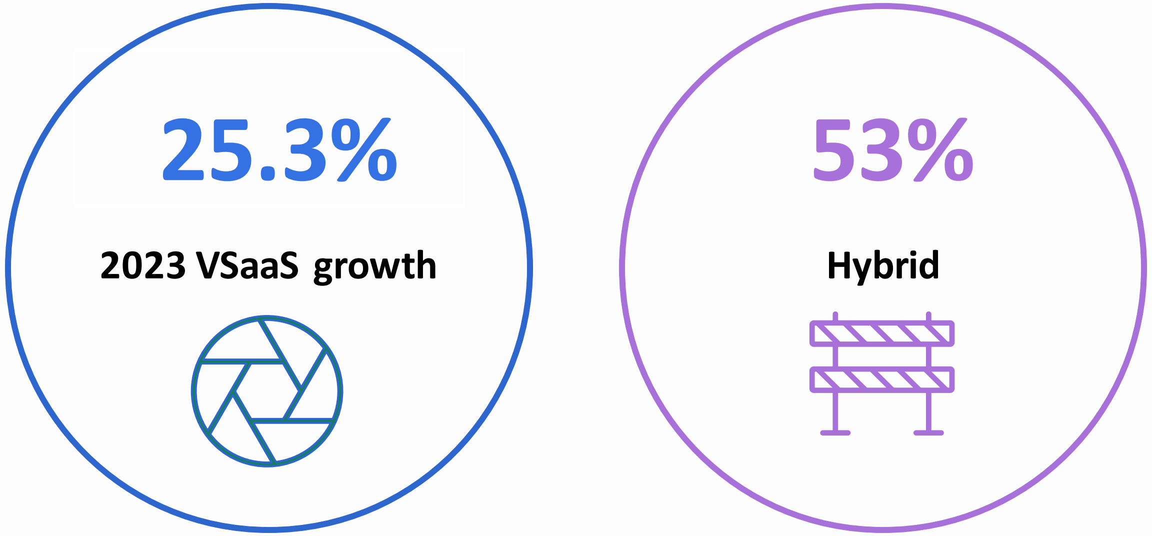
Physical and cybersecurity convergence

- For end-users, the line between physical and cybersecurity continues to blur, with solutions that bridge the gap between traditional security systems and network infrastructure narrowing. End-users want holistic threat intelligence and incident response capabilities, safeguarding against attacks that target both digital and physical assets. Additional devices added into solutions increase attack vectors, this is compounded by integration with more databases and analytics; which also increase the value of the data.
- VSaaS finds itself particularly vulnerable to customer privacy and data concerns. Cloud-curious end-users often cite that these are important factors considered during the buying decision, far more so than customers asking for typical onsite or low hybrid solutions.
- Hybrid solutions are sometimes chosen over full-cloud solutions during the buying process due to cloud security concerns for example a legislated need to store data geographically.
- The industry is poised for more extensive thought leadership, with hardened, privacy focused, and expertise backed solutions providers gaining a distinct competitive advantage.

Growth rate for VSaaS and share of hybrid solutions (2022 World ex. China)



25.3%

2023 VSaaS growth

53%

Hybrid

Source: Omdia

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Physical and cybersecurity convergence

1

Ecosystems are evolving, increasing cyber attack vectors.

Security solutions are constantly incorporating new devices, hardware, analytics, databases, and integrations. Operations are shifting from siloed to interconnected and responsive systems. This interconnectivity vastly improves the effectiveness of the solution, but providers must be aware and keep up with cybersecurity concerns as each addition becomes a new attack vector into the system.

2

Increased interconnectivity, collected data, and data volume produced high payoff, highly visible, and valuable targets.

Customers have become sensitive to privacy and data security, pushing providers to invest in threat prediction and proactive mitigation, and provide secure products with knowledgeable staff to support them. Protocols that extend down the channel from vendors to integrators and end-uses have become necessary.

3

Governments worldwide are prioritizing cybersecurity legislation.

Stricter regulations on privacy and data security, as well as harsher, more visible consequences for breaches and non-compliance are on the rise worldwide. Rising standards will affect where solutions can be installed in sectors such as critical infrastructure and government, where non-compliance in a product portfolio will risk losing future business.

4

Importance of thought leadership and internal expertise for cybersecurity will continue to rise.

The industry will need more close partnerships or internal expertise. Already in short labor supply, cyber security professionals will become a fundamental technology advisor and increase customer confidence. Perception of competence in a firm's expertise will continue to be potent competitive differentiator.

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Generative AI – A paradigm shift in video analytics

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Generative AI – A paradigm shift in video analytics

- In 2023 ChatGPT by OpenAI has been the hot topic of AI. A Generative AI interface that has gone from a virtual unknown to reportedly surpassing 180 million users through August 2023. Generative AI has emerged as a transformative force not only in text and natural language processing but also in reshaping the landscape of computer vision and multimodal applications. For video surveillance, this means extending beyond traditional security applications to encompass operational efficiency and business intelligence.
- A noteworthy advancement in computer vision is the introduction of Vision Transformers (ViTs), which represent a departure from traditional Convolutional Neural Networks (CNNs). While CNNs have long been the backbone of image processing tasks, ViTs will gain prominence for their ability to capture long-range dependencies.
- Given their complementary nature CNNs will still be required. ViTs, with their holistic understanding, can contribute to overall scene comprehension, while CNNs will still play a role in capturing local features and spatial hierarchies.
- Beyond the architectural shift, generative AI brings several impactful changes to video surveillance. The intersection of generative AI, ViTs, and CNNs is reshaping video surveillance beyond conventional security applications with advancements in synthetic data generation, reduced development time, enhanced natural language interactions, and heightened accuracy and scene perception. The precision brought about by generative AI reshapes the role of video surveillance beyond traditional security concerns, positioning it as a valuable tool for operational efficiency and comprehensive business intelligence.

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Generative AI – A paradigm shift in video analytics

1

Synthetic data generation for training datasets.

One notable development is the creation of synthetic data for training datasets. Generative models facilitate the generation of diverse and realistic synthetic data, addressing data scarcity and privacy concerns. This not only aids in training robust models but also accelerates development cycles for new surveillance applications.

2

Generalizable capabilities of generative AI significantly reduce development time for new models.

The adaptability of these models allows for quicker responses to evolving surveillance needs. This reduction in development time not only streamlines the implementation of new models but also enhances the overall responsiveness of surveillance systems, ensuring that they remain at the forefront of technological advancements.

3

Natural language interactions - a transformative shift in user interfaces with applications.

With multimodal application, end-users can interact with video feeds using natural language “chat bot” interfaces, ushering in a more intuitive and context-aware experience. The development of “show me” type commands enables smoother navigation through video data and facilitates the extraction of valuable insights.

4

Perception and accuracy increase contribute to a fundamental improvement in information extraction.

This heightened accuracy, encompassing improved object detection, scene understanding, and anomaly detection, results in more reliable and actionable intelligence. Beyond traditional security concerns, businesses can leverage this advanced accuracy to gain deeper operational insights, and make informed decisions.

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Large Model Applications in Intelligent Transportation

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Large Model Applications in Intelligent Transportation

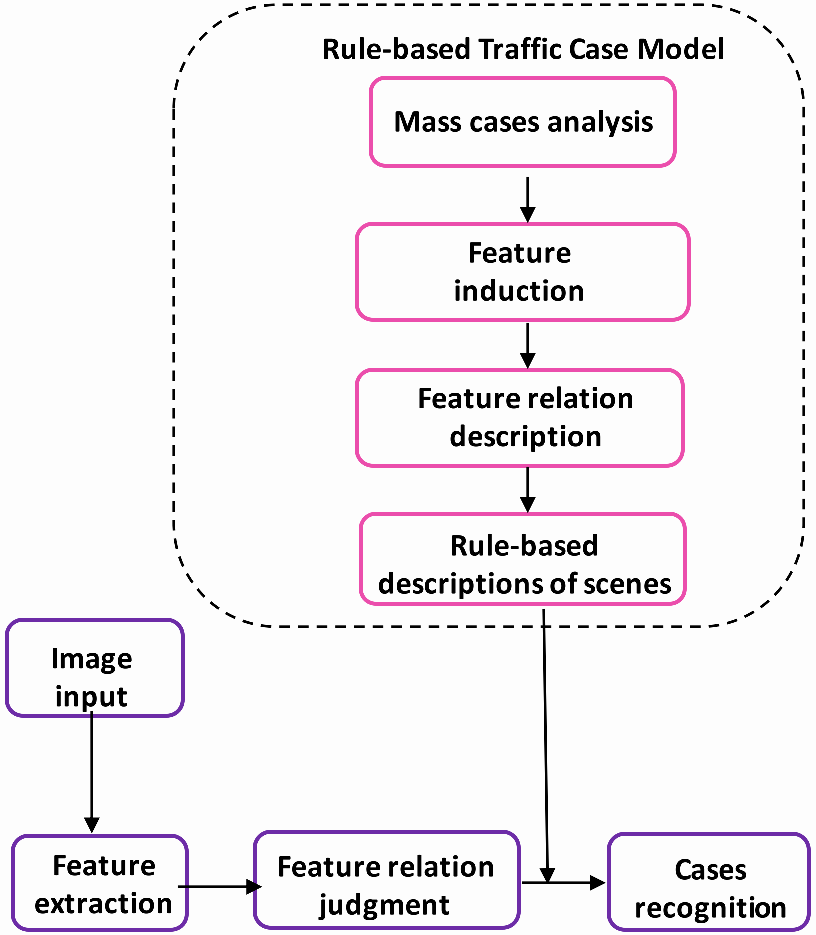
The emergence of ChatGPT in early 2023 showcased the potential of AI and the groundbreaking large model technology. Despite still being in the exploratory phase, large models have demonstrated their ability to enhance the perception of discriminative AI in traffic scenarios.

The "large model" in this article refers to larger models based on a large number of parameters or nodes, including various types of large-scale neural network models used in different fields, not just limited to the large language models (LLM) used for natural language processing.

The advantage of large models: they can improve the perception ability of discriminative AI in traffic scenarios.
Before large models, small CNN and recurrent neural network (RNN)based models could already recognize traffic elements efficiently, offering advantages like speed and resource efficiency.

Large models excel in recognizing small targets after pre-training with a vast amount of data. They can quickly expand recognition types with limited samples, boosting traffic protection and guidance equipment recognition. Small models require more samples to train from scratch.

Large models also exhibit stronger inductive scene understanding ability. In contrast, traditional rule-based traffic scene recognition (as shown in the figure on the right) can only identify specific scene elements such as traffic construction. It identifies construction by assessing cones and construction signs, but it cannot effectively identify situations like construction areas built with traffic cones and fences.


Rule-based Traffic Case Model
Mass cases analysis
Feature induction
Feature relation description
Rule-based descriptions of scenes
Image input
Feature extraction
Feature relation judgment
Cases recognition

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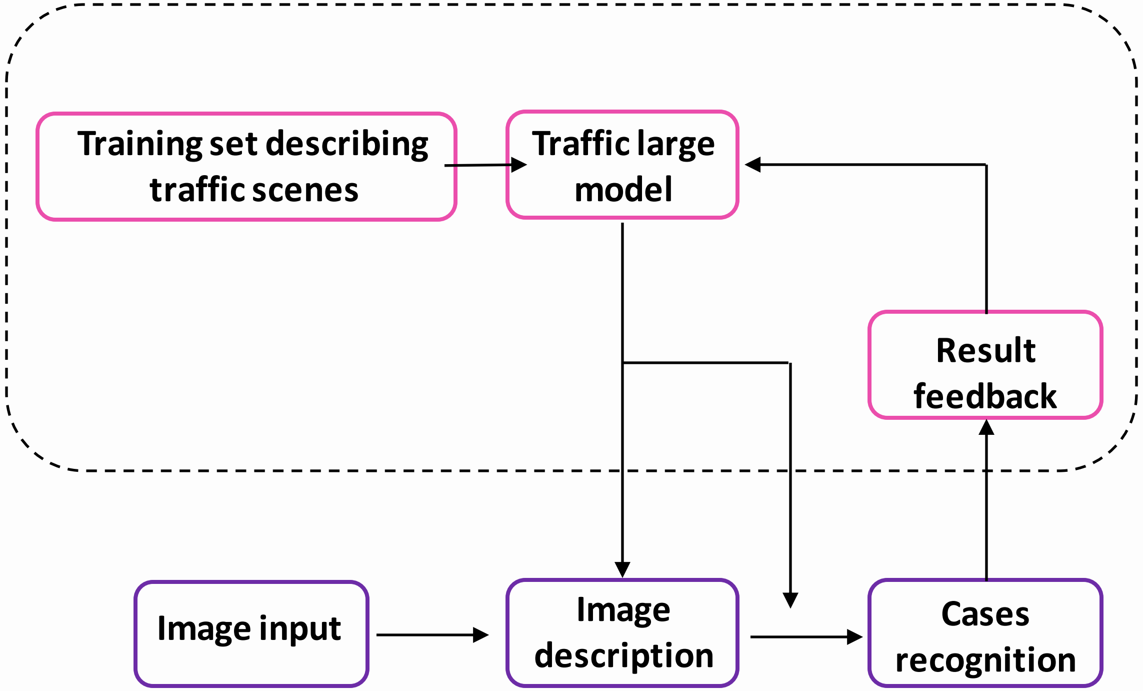
Exploration of Large Model Applications in Intelligent Transportation

Large models adopt an inductive scene understanding method, which does not need to annotate the specific elements of the scene, but uses a large number of scene picture descriptions as the training set to train a model with specific traffic scene description ability. For example, in the figure on the right, large models can identify construction and vehicle accidents by describing the picture scene. This scene recognition method does not rely on detailed rules, but improves the recognition effect through adaptive learning, and can also further optimize the scene recognition effect by fine-tuning the large model training set.



Application cases of large models in the industry

Currently, some leading technology companies in the industry have applied large model technology to bring innovative solutions to the industry. For example:

- In April 2023, Baidu released the digital human “Jian Lulu” based on the Wenxin large model in the highway field, serving the whole process of road network monitoring, emergency command, maintenance management, and public travel. It can answer user’s questions, provide new conversational interactions, and give accurate answers in real time.

- Hisense cooperated with Pengcheng Laboratory to train the Pengcheng-Dasheng visual large model with leading performance using Pengcheng Cloud Brain II, and open-sourced it on Github. Hisense integrated traffic scene data to improve the visual perception and generalization ability of large models.

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Exploration of Large Model Applications in Intelligent Transportation

The development and challenges of large models in the industry

Large models for traffic scenarios will remain a market-driven development direction for a long time to come. But to achieve large-scale implementation, there are at least three challenges to overcome:

- First, the traffic industry faces the challenge of data security. Data ownership is a very sensitive issue, which requires transforming raw data into valuable data assets, resources and elements, and then developing data products.
- Second, the training and iteration of large models in the traffic industry require a lot of computing resources, which will increase the cost. However, the traffic industry also benefits from Moore's law. As more resources are invested, technological advancements (including chip computing power, algorithms and data iteration) will make the cost drop rapidly, which is conducive to the promotion and application of large models fortraffic scenarios.
- Third, the traffic industry's understanding of large models is not deep enough. Industry practitioners and enterprises stillhave a lot of room for improvement in the investment and application of large models and need to strengthen the integration and innovation of largemodels and the traffic industry.

Finally, when many people flock to the same track, bubbles are inevitable. It is after the market frenzy subsides and the industry "de-bubblizes", that true competition around the large model begins.

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Unveiling the power of body worn camera metadata

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Unveiling the power of body worn camera metadata

- **Usage of body worn cameras has grown significantly over the past 5 years, with the evolution and deployment of this technology playing a key role in redefining policing practices.** Body worn cameras have played a key role in capturing incidents as they occurred and have worked their way into becoming a key evidential tool for policing.
- The amount of video footage police departments handle has grown drastically alongside these deployments. Managing and analysing this footage has proved a particular challenge for organisations. 2024 will be a key turning point for organisations in handling this aspect of body worn camera deployments.
- Body worn cameras are emerging as invaluable sources of data beyond simply the video footage provided and can act as a key tool to help organisations integrate and correlate disparate sources of data.
- **2024 marks a turning point in recognising the importance of the digital treasure trove body worn cameras bring to an organisation.** This digital treasure trove encompasses more than just video footage: it encapsulates crucial details such as officer information, timestamps, geolocation data, and incident tags, to name only a few metadata elements that body worn cameras can provide.
- The strategic management of this metadata will prove to be key in wrangling the ever-expanding volume of digital evidence.

Body worn cameras, DEMS and police in-car video markets

$3 billion

Revenue for BWC, DEMS and police in-car video by the end of 2027

15.8%

Global BWC and DEMS CAGR for 2022-2027

The global body worn camera and DEMS market is still growing rapidly and is expected to more than double in size by the end of 2027.

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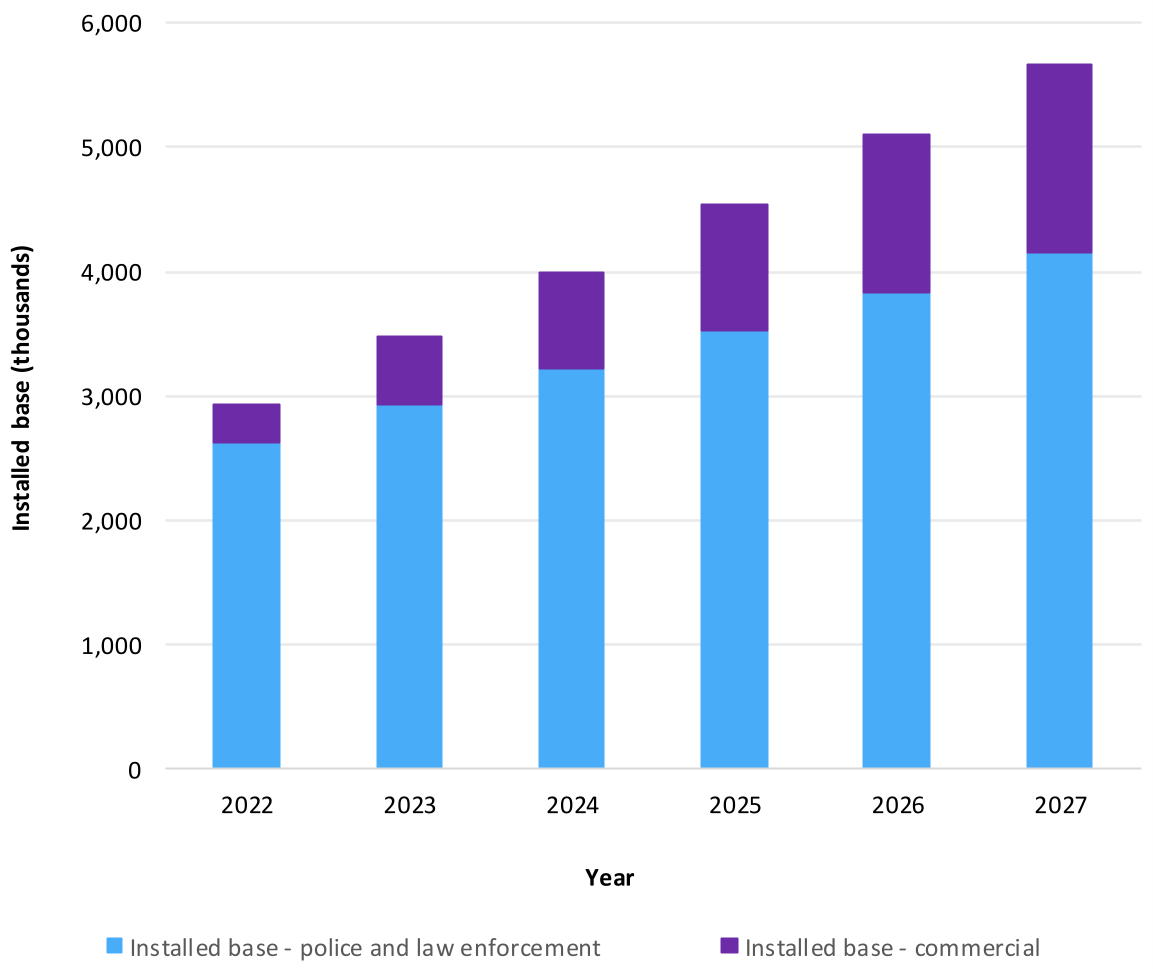
Unveiling the power of body worn camera metadata

- Within the realm of metadata, tagging systems are emerging as powerful tools. The meticulous association of specific information with video files allows for efficient categorization and retrieval of footage.
- **Omdia expects to see a surge in the adoption of advanced tagging protocols that enable nuanced categorization and comprehensive data retrieval.** The ability to apply multiple tags to a single video will become commonplace, providing a more detailed and contextual understanding of incidents.
- Body worn cameras commonly now have GPS capabilities, allowing the integration of geolocation data from the body worn camera metadata alongside the incident created in the records management system. Law enforcement organisations will increasingly recognise the importance of this geospatial context that can be provided, as it paves the way for more accurate reconstructions of events and improved situational awareness.
- **A critical trend to watch for here will be a push for higher activation rates of body worn cameras for improved data accuracy.** Police organisations will prioritise achieving activation rates between 85-95%, recognising that this threshold is essential for improving the data accuracy and comprehensiveness of records management and law enforcement interactions.

World installed base of body worn cameras by end-user sector



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The evolution of mobile credentialing to mobile access solutions

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The evolution of mobile credentialing to mobile access solutions

- Mobile credentials are alternatives to physical cards that store credentialing data on a prospective entrant's smartphone application. The credential interacts with a compatible reader and transmits data required to authenticate a person's identity. Mobile credentials offer building occupants greater flexibility because entrants only need to possess their smartphone to enter any number of compatible facilities. Most mobile capable readers can accurately interpret transmitted data from moving smartphones, meaning that entrants can simply walk through designated entryways with their phones stored in their pockets and have their identities authenticated in real-time. The use of mobile credentials also offers substantial benefits to building owners, such as lowered credential management costs and increased access to real-time occupancy data from entrants' phones.
- Access control vendors have cited mobile credentials as the dominant technological trend in access control. According to IFSEC Insider's Wireless Access Control Report, 29% of surveyed end users in 2023 reported mobile credential compatibility with their physical access control systems, a near tenfold rise from their 2021 survey.

Market demand for mobile credentials will continue to experience robust growth

83 million

CREDENTIAL DOWNLOADS

Mobile credentials comprised over 18% of access control credentials issued in 2023.

34%

ANNUAL GROWTH RATE

Global revenues from sales of mobile credentials are projected to reach over $168m by 2027.

Global market demand for mobile credentials is expected to grow at rates four times faster than demand for access control hardware over the next three years.

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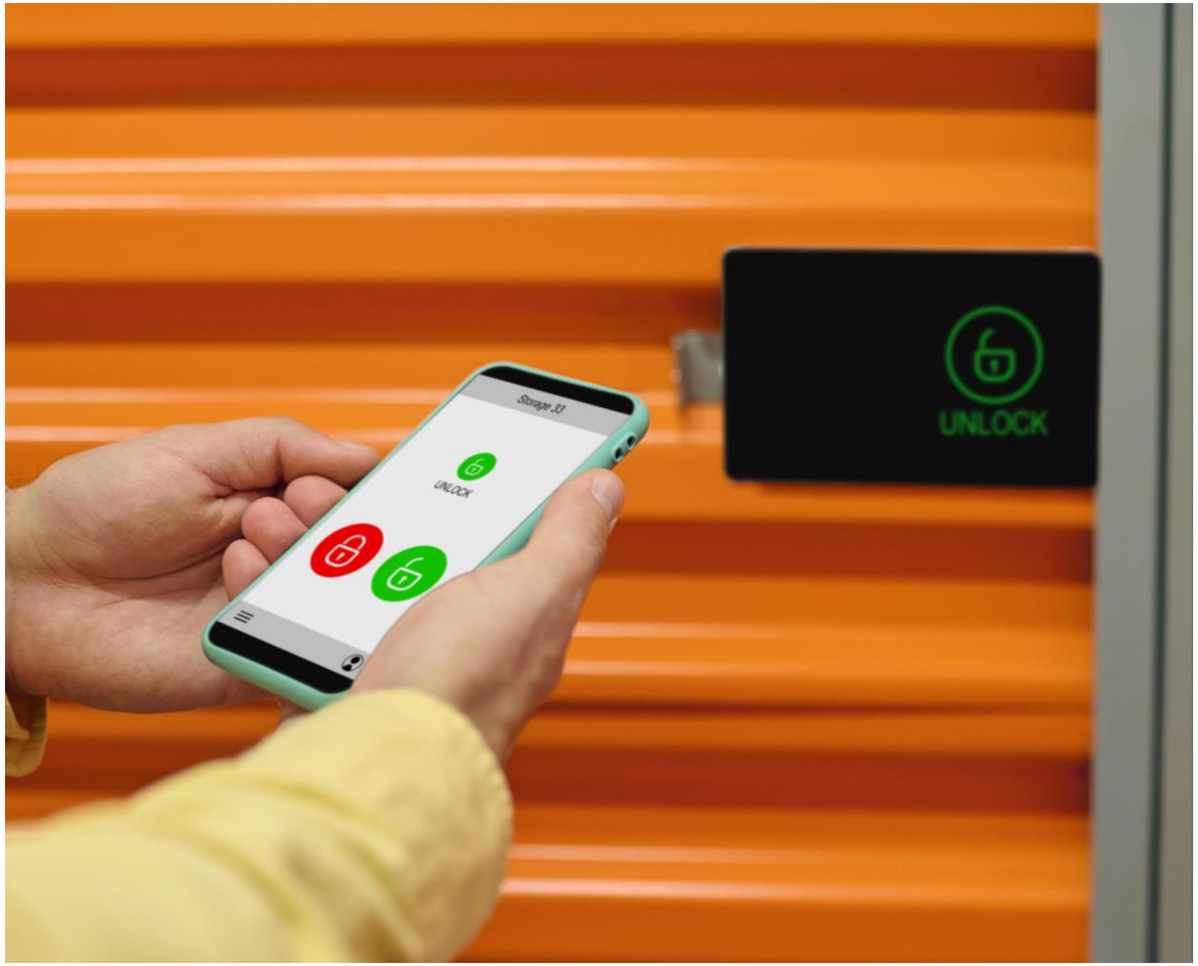
The evolution of mobile credentialing to mobile access solutions

- An emerging trend has involved the transition from an industry perception of mobile credentials as a distinct product offering to viewing these credentials as a component of a comprehensive mobile access solution. Many access control vendors are developing application ecosystems around their mobile credentialing software and integrating their apps to accommodate use cases beyond the scope of physical access control systems. For example, a mobile credential platform can be connected to a contactless payment system, allowing occupants to use their credentials to facilitate purchases at facilities such as restaurants and convenience stores across an interconnected campus. This mobile application can transmit real-time notifications to entrants based on their exact location, time of day, and behavioral patterns tracked by the application.



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Mobile access solutions: Key messages

1

Mobile access solutions have shifted the market to prioritize improving entrant experiences.

In the past, access control companies developed their software with only a building's hired security professionals in mind as their end users. The transition to mobile access and front-facing applications has underscored a need to prioritize the needs and preferences of entrants. This has led to stronger focuses on user interface, accessibility and graphics design.

2

Burgeoning sales of mobile credentials has begun to impact demand for physical cards.

In previous years, mobile credentials were limited to playing a supplementary role and did not displace the widespread use of cards and badges. However, a growing percentage of end users are expected to adopt mobile credentials as their sole authenticator in 2024. Warehouses, IT companies, university campuses, and utilities are expected to lead this trend.

3

The market for mobile credentials is split between two competing transmission formats.

Most mobile access systems have pivoted to either Bluetooth Low Energy (BLE) or Near Field Communication (NFC) formats. The NFC format is expected to gain market share in 2024 in the wake of Apple's introduction of Wallet support. BLE offers a longer 150 feet transmission range, while NFC requires less power and is often considered the more secure format.

4

Monetization of mobile credentials has presented a challenge for many vendors.

As market demand for mobile credentials has grown, vendors gradually transitioned to monetizing their product offerings. However, the low cost of creating virtual credentials has led to fierce competition among vendors who have undercut the market by offering these credentials for free or bundling them with physical credentials or access control readers.

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Mobile access solutions: Key recommendations

Player type	What will the impact be?	Impact rating	How should players respond?
Access control equipment vendors	Competitors that choose to forgo mobile access solutions will be at a severe competitive disadvantage. This is true even for hardware vendors that do not sell physical credentials. Mobile-capable readers constituted nearly 26% of global reader sales in 2023 and this percentage is expected to more than double by 2030.	[✓ +2] +1 – -1 -2	Equipment vendors should choose between strategies that entail aggressively developing and promoting their own proprietary mobile access solutions, partnering with Apple or Google and offering Apple or Google Wallet based credentials, or supporting open and interoperable digitized credentials such as the Public Key Open Credential (PKOC.)
Systems integrators	The proliferation of mobile access solutions will lead end users to hire systems integrators who are intimately familiar with the modality. End users will prefer to hire internal systems integrators and solution providers affiliated with major mobile credentialing brands.	+2 +1 – [✓ -1] -2	Independent integrators will benefit from educating themselves on use cases for mobile credentialing and partnering with mobile access vendors. Integrators that work on retrofit projects should become competent with installations of attached components of mobile-capable modules onto existing readers.
Building owners	As mobile access solutions become more ubiquitous, an increasing percentage of prospective entrants will expect to use their phones instead of cards or badges to enter facilities. This is particularly true in vertical markets with younger and more tech-savvy entrants.	+2 [✓ +1] – -1 -2	End users can leverage mobile access solutions to collect accurate real-time data relating to occupancy levels and entrant behaviour patterns. This influx of data can improve a site's security, improve energy efficiency and promote tailored experiences that will attract and retain entrants.

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Radar playing a key role in the perimeter security market

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Radar playing a key role in the perimeter security market

1

As security threats continue to evolve, end users risk falling behind in a technological race.

There is growing pressure among end users to invest in physical security as geopolitical conflicts around the globe continue. One area this is keenly felt is the perimeter security market, which focuses on the protection of the perimeter of a building or site.

2

Criminals and threats have continued to innovate, leveraging new technology.

Historically, securing one's perimeter would typically concern ground security, including smart fences, thermal cameras, and an array of security sensors. However, as bad actors have not sat idle, instead keeping abreast of technology as a means of potential infiltration, sabotage, or surveillance.

3

To stay one step ahead, these potential threats have turned their gaze to drones.

The most significant threat of drones is the low barrier of entry. Proliferation of commercial drone usage and progress across aviation regulations, has led to falling costs over the years. Using readily available online media, a civil or commercial drone can be easily modified to significant effect.

4

The role of radar will be significant in the coming years, across both ground and airspace.

This development has led to the elevation of the threat to perimeters from a 2D space to a 3D one. End users must now lift their views and invest in security to protect not only its ground security, but its airspace too. As costs come down, radar is set to play a key role in the protection of these spaces.

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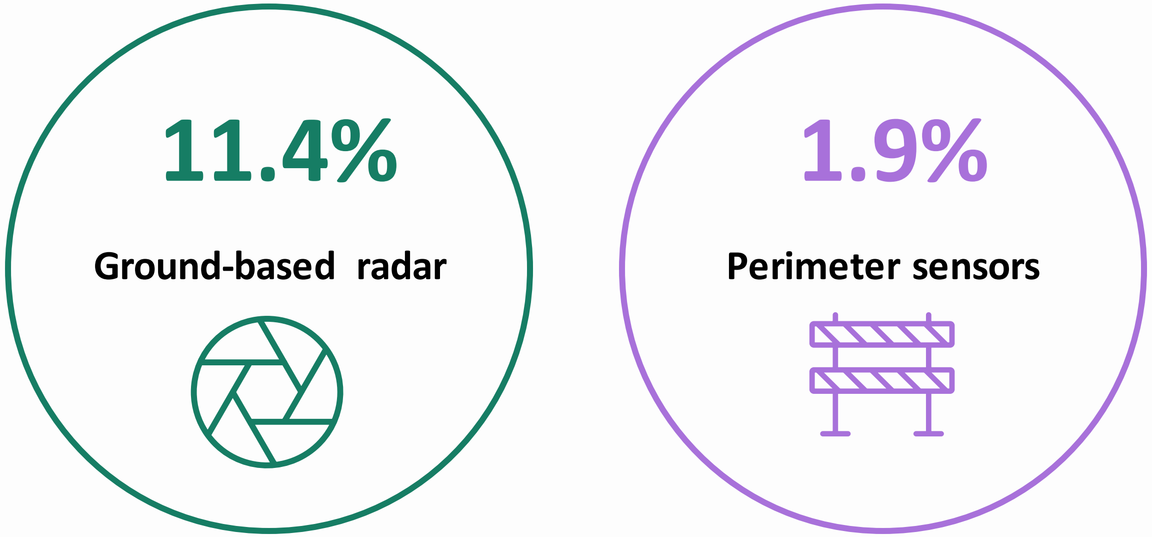
Radar playing a key role in the perimeter security market

- Historically, radar was chiefly a military application due to its cost and capabilities. However, over the years, prices have come down, and leading security equipment manufacturers have developed more commercially-focused offerings. These come in the form of short-range ground-based radars, with varying options of FOVs.
- Across the perimeter security market, perimeter sensors are utilized to create a virtual barrier, within this segment the ground-based radar market is significantly larger in size and is forecast to grow faster than any other perimeter sensor, such as microwave, infrared, and buried sensors.
- Radar, however, is also being leveraged to protect one's airspace. Due to its capability to detect a moving object at range, it has become a key solution in the counter-drone security space. It does have its flaws, namely, a relatively high false positive rate, as it displays difficulty differentiating between airborne objects such as birds.
- It is, however, increasingly being used in combination with other detectors, such as optical and acoustic, as a means of visual or audible verification. As this market trends towards a more integrated approach between technologies, expect radar to form a vital part of this in the coming years.

Growth rates for ground-based radar and virtual barrier sensors (CAGR 2022-27)



Ground-based radar is forecast to grow at ten times the rate of all other perimeter sensors.

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VIoT: a move to Cloud-based security solution

A China perspective on VSaaS

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VIoT: a move to Cloud-based security solution

A China perspective on VSaaS

- Cloud adoption in the security industry is becoming increasingly prevalent since the outbreak of COVID. Cloud promises to offer increased scalability, flexibility, and cost efficiency. Meanwhile, the integration of AI-driven analytics has also emerged as a prominent trend, enabling advanced functionalities. This acceleration has pushed key industry players to adapt their offerings and respond proactively to this demand.
- Traditional security manufacturer Hikvision, dubbed "AIoT" product and solution provider, launched its enterprise-level SaaS platform Hik-Cloud back in 2018. The platform offers end-to-end cloud-based solution to integrate video, access control, door phone, along with other IoT devices. Furthermore, Hikvision also launched HikLink in 2021, a cloud-based platform servicing SMB sector with standard solution.
- Now in China, a new concept emerges within the security industry – VIoT. Led by China Telecom, VIoT provides a comprehensive cloud-based video service platform that enables video access, storage and processing for edge devices from various brands. Announced in late 2021, VIoT initiative aims to build a centralized video management and AI-based analytics platform. China Telecom's VIoT at present targets consumer, enterprise and government sectors. VIoT initiative has made significant progress since its debut. In November 2023, China Telecom released a visual foundation model, which will further empower the VIoT applications. As of November 2023, the video devices connected to China Telecom's VIoT platform exceed 60 million.
- New entrants are also proactively tapping into VIoT space. Historically focused on consumer electronics and cybersecurity solutions, 360 announced its entrance into SMB security market with its SaaS and hardware offerings at Security China show in June. Based on its LLM, 360 launched its visual foundation model embedded on 360 Visual Cloud platform offering Open Vocabulary Object Detection, Image Caption Generation and Visual Question Answering functionality. At CPSE in October, 360 made the OVD functionality available to SMB end users for open beta.

2.9 mi

Direct-to-Cloud cameras shipped in 2022

2022-27 CAGR 16.2%

$479.3 m

2022 World VSaaS revenue

26.3%

2022–27 CAGR VSaaS

Note: Above data points only include professional video surveillance market .

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Embracing the integration of AI and machine learning in the control room

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Embracing the integration of AI and machine learning in the control room

- **In the ever-evolving landscape of control room technologies, the integration of Artificial Intelligence (AI) and Machine Learning (ML) stands out as a transformative trend poised to shape the industry's trajectory in 2024 and beyond.**
- The marriage of control room systems with AL and ML technologies promises to revolutionize operations across various sectors, fundamentally reshaping how control rooms operate and manage critical communications, making them more efficient, more responsive, and more capable than ever before.
- One of the key advantages of integrating AI and ML into control room systems lies in the ability to generate predictive insights. Control rooms traditionally rely on reactive responses to events. However, with the infusion of AI and ML algorithms, operators gain the capability to foresee potential issues based on historical data and real-time analytics. This shift towards predictive decision-making empowers control room personnel to proactively address situations before they escalate, thereby optimizing resource allocation and response times.

Command and control room markets

$7 billion

Global revenue for the control room market by 2027

34%

Proportion of control room refreshes deploying cloud-based solutions

The global command and control room market continues to grow and adapt, with cloud adoption growing amongst multiple technologies, paving the way for advanced artificial intelligence deployments.

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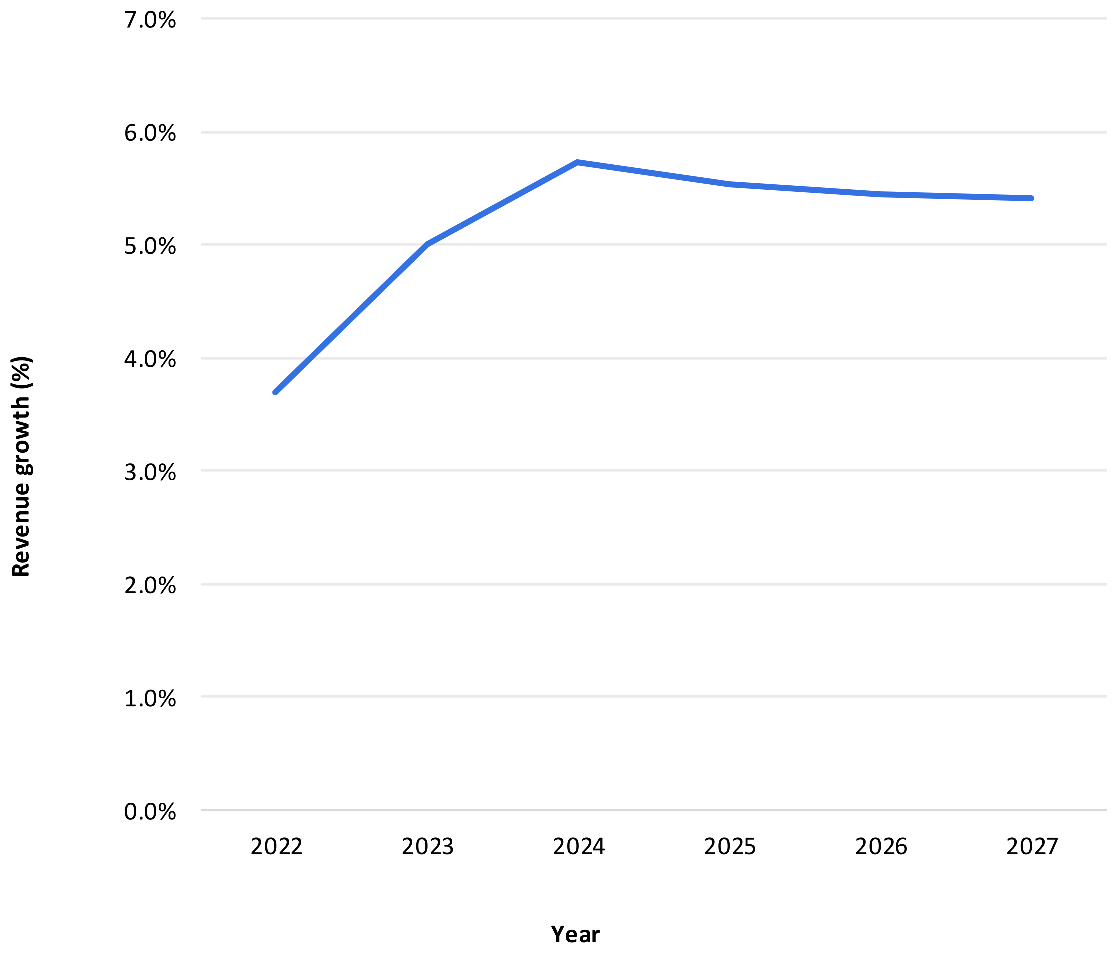
Embracing the integration of AI and machine learning in the control room

- AI and ML technologies excel at handling repetitive and data-intensive tasks, allowing control room operators to focus on more complex decision-making processes. Automation of routine activities, such as data analysis, incident categorization, and alert prioritization, not only reduces the burden on human operators but also minimizes the risk of errors associated with manual tasks. This, in turn, leads to increased operational efficiency and a more streamlined workflow within the control room.
- Incorporating AI and ML into control room systems enables real-time anomaly detection, a critical capability for identifying irregular patterns or potential threats. By continuously analyzing incoming data streams, these technologies can recognize deviations from established norms, triggering immediate alerts and facilitating rapid response protocols. This level of proactive monitoring enhances overall situational awareness and ensures a more resilient and secure control room environment.
- **The integration of AI and ML into control room systems heralds a new era of intelligent and responsive operations.** As we look to 2024, this trend is set to redefine the capabilities of control rooms, empowering organizations to not only react swiftly to events but to anticipate and prevent them, ultimately elevating the standard of safety, efficiency, and decision-making across industries.

The world market for command and control rooms



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Critical communications evolve from voice-centric to data-focused

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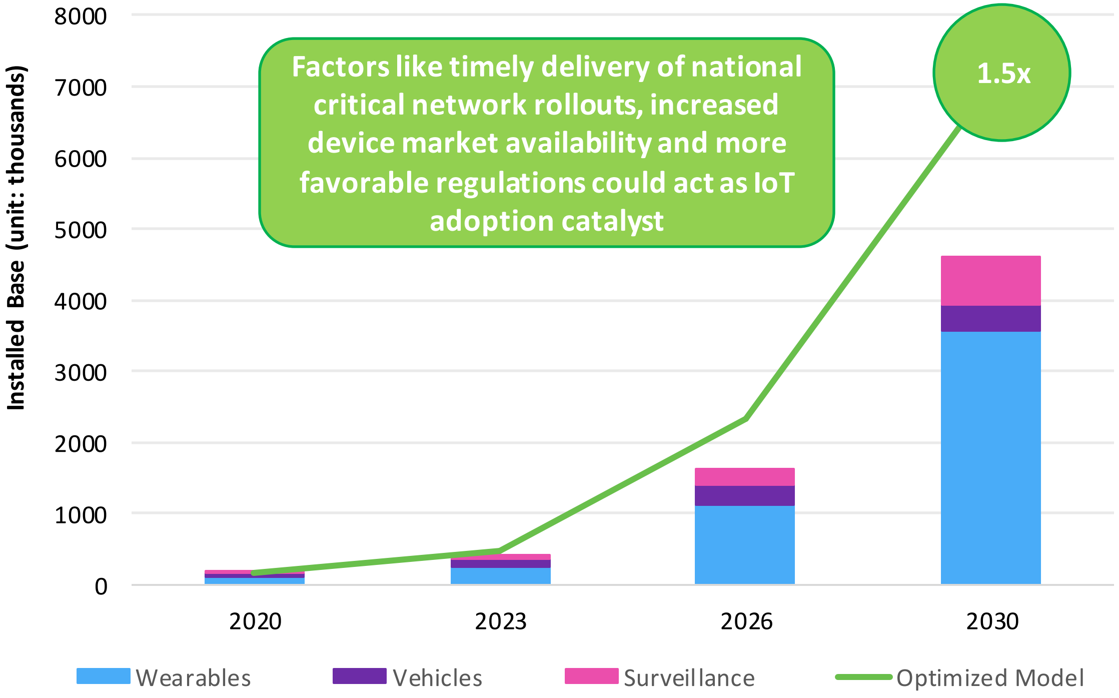
Critical communications evolve from voice-centric to data-focused

- Mission critical communications are in constant evolution to support their users under the most strenuous circumstances. In response to market demands for data-rich features and services, an increasing number of nations are moving to adopt 3GPP mission-critical LTE services for group voice communications, data access, and video support.
- Consequently, IoT device will be deployed in various environments ranging from wearable sensors to connected vehicles, enhancing traditional voice-centric applications with real -time data. These devices have some form of embedded connectivity that allows direct connections to the internet (i.e., IP-addressable) and the gathering, processing and distribution of data in emergency situations, providing crucial insights and situational awareness.
- In Europe, the adoption of Internet-of-Things (IoT) technology dedicated to the needs of mission critical users (in particular, public safety agencies in the context of connected officers) is a growing market that will surpass 4 million active connections by 2030 driven by the implementation of data-centric transformation of PPDR operations.
- Timely delivery of critical network rollouts, increased device market availability, and favourable regulations could act as market catalysts increasing the installed base up to 1.5 times, surpassing 7 mil. IoT devices.

Mission Critical IoT system adoption in Europe - Public Safety



Factors like timely delivery of national critical network rollouts, increased device market availability and more favorable regulations could act as IoT adoption catalyst

Source: Omdia

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Critical broadband communications unlock the potential of MC-IoT

The Internet of Things stands as a transformative force in in critical communications for the public safety community. The ability to collect transmit, and analyse real time data significantly enhances the efficiency, response time and overall effectiveness in crisis management. The major areas of adoption of Mission critical IoT are expected to be:

Wearables

- The concept of the "connected- officer" empowering first responders with real-time data feeds and automated sensing/trigger capabilities will represent the largest proportion of cellular mission critical IoT systems in public safety networks. By 2030, Omdia predicts that the wearables market will be the largest market for MC Cellular IoT systems with over 3.5 million installed devices in Europe.

Vehicles

- Omdia forecasts that close to 80% of public safety vehicles will be equipped with cellular connectivity by 2030 in Western Europe and 65% in Eastern Europe.

Surveillance

- The availability of spectrum resource dedicated to public safety operations will act as a catalyst to the adoption of video-centric IoT surveillance. Omdia estimates the fastest growth will be experienced in the video camera market at a 60.7% CAGR from 2020 to 2030.

Mission Critical IoT adoption drivers for public safety users

01 Improved first responder safety

02 Shorter crisis response time

03 Operations efficiency or productivity gains

04 Cost saving

05 Greater insights into operation status

06 Improved sustainability

Source: Omdia

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Appendix

Omdia Consulting

We hope that this analysis will help you make informed and imaginative business decisions. If you have further requirements, Omdia's consulting team may be able to help you. For more information about Omdia's consulting capabilities, please contact us directly at consulting@omdia.com.

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