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GROWTH OF SMART SURVEILLANCE IN INDIA

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ABSTRACT

CCTV is a developing business sector as it is broadly utilized in numerous applications everywhere throughout the world. Technology is the primary case in the CCTV camera market in India. IP Video Reconnaissance and CCTV are quickly becoming the norm in public spaces. This report is about the market size of the CCTV camera market in India how with the increasing number of terrorist activities, the demand of CCTV market is continuously increasing. The report also reveals the trend in this industry is shifting to people becoming more conscious about the security and the increasing thefts than being pessimist about the cost involved in buying the product. The report also includes the technology used in the modern smart surveillance with news features.

KEYWORDS: ***smart surveillance, CCTV, Video Reconnaissance.***

INTRODUCTION

India has the world's second biggest population, a growing white-collar class and without a doubt an enormous market which pulls in worldwide speculators. The world's biggest partnerships have workplaces in India. In the Data Age, the market rotates around information and organizations which create innovations fit for mining such information are on the ascent. At the same time, organizations offering surveillance advancements have all the earmarks of being on the pinnacle as well, particularly since the worldwide War on terror requires law authorization offices around the globe to be outfitted with the latest surveillance gear.

Terrorism is without a doubt a noteworthy issue in India, particularly considering the various psychological militant assaults in the course of the last a quarter century. With a population of over a billion people and high levels of mass poverty, multiple religions, languages, and ethnicities-crime also appears to be a major security threat in India. In that capacity, Indian law enforcement agencies require devices to help them in handling wrongdoing and psychological oppression in the nation. Such devices can incorporate different sorts of surveillance innovations, which are being utilized by law requirement offices around the globe.

IP Video Reconnaissance and CCTV are quickly becoming the norm in public spaces. Emerging video surveillance tools allow for greater networking of cameras, greater fields of vision, cheaper access and come with a host of tools such as facial recognition and tracking as well as vehicle tracking. Closed-circuit television (CCTV), also known as video surveillance, is the use of video cameras to transmit a signal to a specific place, on a limited set of monitors. It differs from broadcast television in that the signal is not openly transmitted, though it may employ point to point (P2P), point to multipoint (P2MP), or mesh wired or wireless links. Though almost all video cameras fit this definition, the term is most often applied to those used for surveillance in areas that may need monitoring such as banks, stores, and other areas where security is needed.

There are around 350 million surveillance cameras worldwide as of 2016. About 65% of these cameras are introduced in Asia. The development of CCTV has been abating as of late.

APPLICATION AND USES

Fig 1. CCTV in different market sectors.

In private sector CCTV surveillance technology is operated in a wide variety establishment such as in industry/manufacturing, retailing, financial/insurance/banking, transportation and distribution, utilities/communications, health care, and hotels/motels, parking areas, jewellery shops.
The most used purposes include

- Crime prevention: CCTV caused a significant reduction of crime by on average 16%.
- Industrial processes, Transport safety, Traffic monitoring.
- Sporting events, monitoring employees.
- Use in schools, criminal use, public places.
- Security: CCTV systems are often used for security monitoring purposes in organizations and homes.

FACTORS FUELING SMART SURVEILLANCE

At present, the Indian Video Surveillance Industry is developing with a CAGR (Compound Yearly Development Rate) of 27.16 percent – or more than four times the India's GDP growth in 2017.

- **Redundancy**: IP-based surveillance frameworks can oblige various use cases including identification of violence, vandalism, burglary, fire risk, break into limited territories etc and can trigger a caution with the concerned department with no human mediation.
- **Wide-angle Views**: 180^0 and 360^0 cameras can transfer higher definition video with a broader area of coverage.
- **Machine Learning and Business Intelligence**: Video analytics, when coupled with Machine Learning (a subset of Artificial Intelligence), can provide deeper insights into work dynamics that often go overlooked otherwise. For instance, video analytics can identify the level of customer satisfaction by analysing the facial expressions of customers and use Machine Learning to establish relevant correlations.
- **Cloud Technology**: The approach of cloud computing has empowered businesses to enjoy the most sophisticated IT infrastructure, software, and applications on 'pay as you go' premise. This is a more practical approach as it does not involve large-scale capital lock-in in infrastructural spends and one of the primary growth drivers.
- **Smart Cities:** The aspiring Smart Cities Mission will unveil 100 smart cities in India which will see smarter administration of infrastructure and assets to get more value from the current framework. One of the most fundamental elements of these upcoming smart cities will be surveillance systems that will be installed across various touchpoints. Every smart city will, moreover, have video walls that will continuously monitor the city-wide operations and ensure that they are conducted smoothly. Most of these operations – including traffic management and law enforcement – will either be completely automated or will observe

process-based automation. In the ongoing surges which influenced Mumbai on 29 August 2018, the 5000 CCTV cameras helped the Mumbai traffic police convey labour in the territories where it was required the most.

SMART SURVEILLANCE HARDWARE

- **Motion Detection:** There are motion detection cameras that will turn on only when a sensor attached to the vision system senses movement in the field of view.
- **Night Vision:** Night vision is becoming a standard-issue feature in most modern security cameras.
- **Footage Management:** Commercially available surveillance systems often feature tools that allow you to snip and edit footage, a feature that can prove useful in many situations.
- **A facial recognition system** is a computer application for automatically identifying or verifying a person from a digital image or a video frame from a video source.
- **Closed-circuit digital photography (CCDP)** is more suited for capturing and saving recorded high-resolution photographs, whereas closed-circuit television (CCTV) is more suitable for live-monitoring purposes.
- **Live look-in:** Once a luxury, live look-in is now a commonplace feature of surveillance systems. If you want your security cameras to broadcast to one of your devices, they should be able to do so. This allows you to check out a situation remotely from the comfort of your phone or laptop. Depending on your hardware a software, the specifics of this functionality can vary widely.

Out of every 100 companies in India producing and selling something related to surveillance technology, 76 are solely selling the surveillance technology.

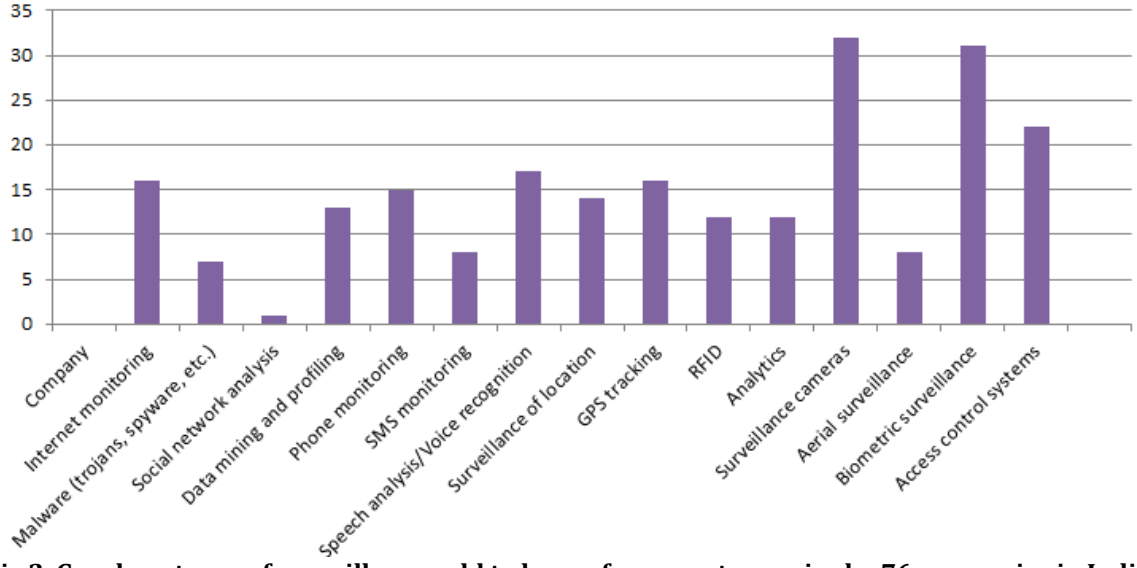

Fig 2. Graph on types of surveillance sold to law enforcement agencies by 76 companies in India.

REPORT METHODOLOGY

The information contained in this report is based upon both primary and secondary research. Primary research included interviews with various channel partners of CCTV camera Products in India. Secondary research included a comprehensive search of relevant publications like company annual reports, financial reports and exclusive databases.

Growth of Sales:

The video surveillance market in India is expected to reach Rs 5718 cr (US$841 million) by the end of 2018, with a CAGR of 32.49%. It is expected to top US$ 2.4 billion by 2020. Currently, though analogue-based surveillance systems have accounted for majority of the share (68%) in the overall market, yet IP-based surveillance systems are expected to increase in the next five years due to increasing IP infrastructure, declining prices and demand for remote access. According to 'India CCTV Camera Market Outlook, 2021,' the India CCTV Camera market is expected to grow with a CAGR of about 27.16% in the period from 2018 to 2021.

The Indian surveillance market is witnessing immense growth from sectors such as city surveillance, hospitality, airport security, BFSI, retail, BPO, manufacturing, college campuses, infrastructure companies and education. The government, in general, is the biggest segment in terms of volume demand. The private sector also shows vast potential.

About 87% of surveillance needs are for commercial purpose, whereas 13% are for residential.

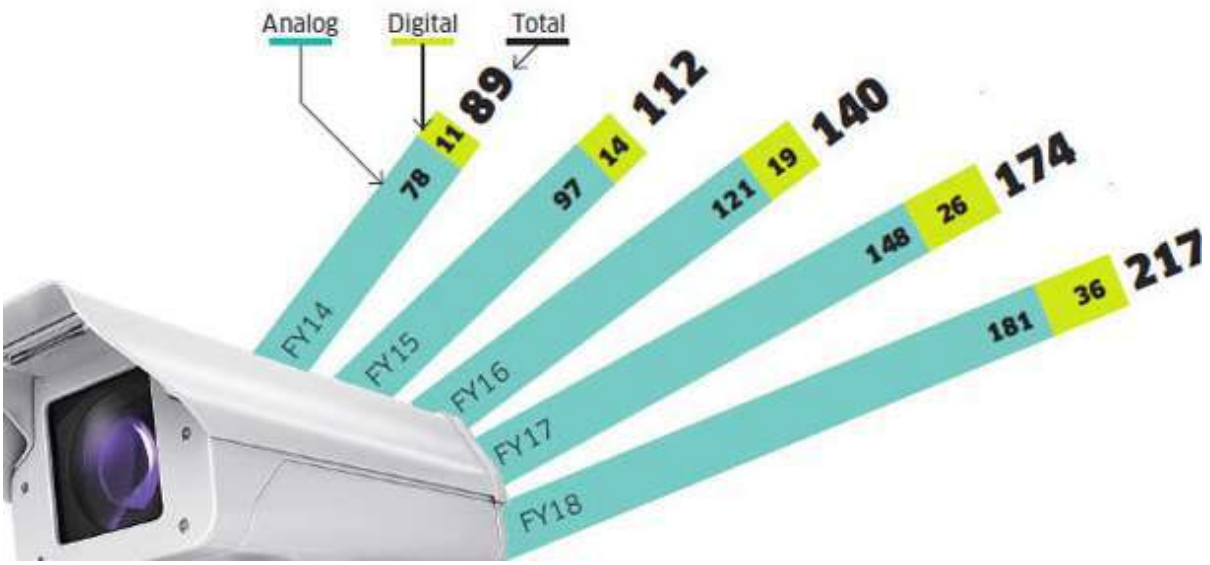

Fig 3. Rise of CCTV cameras (Unit Sales in Lakh).

Fig 3. Clearly shows the no of unit sales are sold in the last 5 financial years. According to industry estimates, over a million surveillance units were sold every month a couple of years ago. Now it is two million. The Indian market is growing 20-25% annually, say experts. Industry source estimate the security & surveillance market was worth Rs 8,200 crore in FY2017, reached Rs 11,000 crore in FY2018 and is expected to touch Rs 20,000 crore in FY2020.

The surveillance and security blast are nourished by a few organizations, going from homegrown firms, for example, CP plus to joint ventures, for example, Prama Hikvision to multinationals, for example, Bosch, Panasonic, Honeywell and Hub. The Telangana venture, for instance, helped Sweden-based Pivot Correspondences extend its India showcase. It has just introduced 1,500 cameras, and more will be introduced soon. Other state governments have or are putting orders.

Here are the best CCTV Camera brands are accessible in India:

Hikvision, CP plus, Zicom, Sony, Samsung, AVTech., Bosch, LG and so forth.

CP plus clients incorporate Vedanta Power and Odisha Police, which has additionally chosen to utilize e-observation to upgrade security. Frost and Sullivan says little and medium ventures and expansive partnerships were as one the greatest end-client fragments in FY18. This portion had a piece of the pie of 33%. Private had a 28% piece of the overall industry; the modern fragment had 18% and the legislature 13%, it said. Other real end-client fragments are accommodation, training and medicinal services.

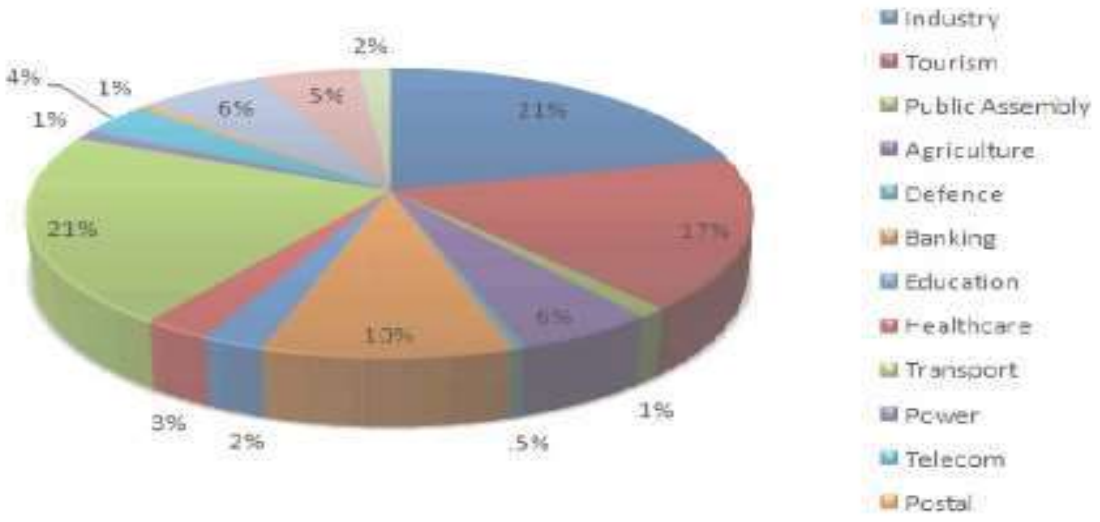

Fig 4. CCTV market sector wise in %.

Fig 4 proves that the industrial sector and transport sector are using the surveillance technology more than other sectors; power and education sector are using the least surveillance technology compared to other areas.

At present, the Indian Video observation industry is developing with a CAGR (Compound Yearly Development Rate) of 27.16 percent and is evaluated to have just checked $841 million as far as market measure.

The CCTV Market is relied upon to develop with a CAGR of over 12% in estimated period 2018-2023. CCTV advertise has higher infiltration in Level 1, 2 cities together contributes over 80% market in India. By district, In CCTV advertise, North commands the market. South and west together contributes over 55% piece of the overall industry. CP In addition to Overwhelms with the Real Piece of the pie Pursued by Hikvision and Dahua, Panasonic, Bosch Security Frameworks, and Honeywell.

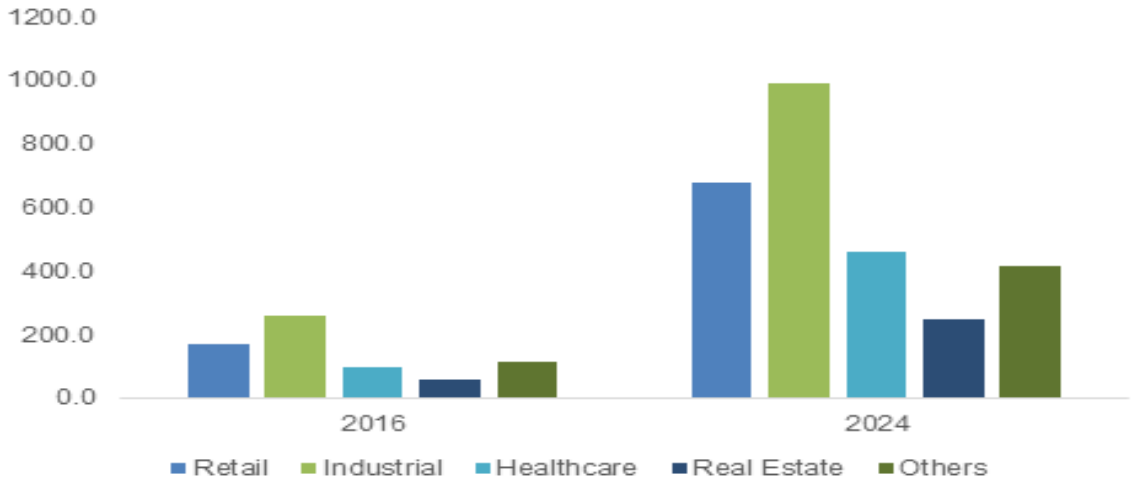

Fig 5. Market Size is estimated to increase in these sectors by 2024.

IP Security Camera Market to Grow at 20% CAGR, 2017-2024 is expected by many experts. Advancement in technology such as 4K resolution, edge-based video analytics and penetration of H.265 high-efficiency video encoding are among factors fuelling growth in IP security cameras.

DISCUSSION

The developing number of players in the system camera market and accessibility of minimal effort fabricating has been powering the development over the globe. Worldwide fear monger assaults as of late have featured the requirement for governments to consider open security. Furthermore, the dropping IP camera showcase value drift has abbreviated the hole with simple frameworks. The worldwide IP camera showcase is set apart by patterns, for example, requirement for high goals, government speculations to enhance security foundation, decrease in all out expense of proprietorship and ascend popular from non-security applications, for example, smart home gadgets. IP cameras frameworks have guide network to the web, subsequently, worry among the general population with respect to information security and protection could adversely affect IP camera advertise development. The development in deals is more a result of open focusing of wellbeing and government considering harmony and advancement of smart cities.

CONCLUSION

Factors, for example, enhanced sensor accessibility, new video examination capacities, more extensive reception of warm imaging, portable access, shrewd building control, 360-degree vision and de-distorting are contributing monstrously towards infiltration of the system camera showcase. The progressing Research and development in the field of video observation and security gadgets is expanding the usefulness of such devices. This has enhanced the designs goals of security feed and diminished the prerequisite of the aggregate number of gadgets. As said before, the market measure is evaluated to develop by 2020 and 2024 on an enormous base.

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