



2021 WESTERN DIGITAL **SMART VIDEO ARTIFICIAL INTELLIGENCE SURVEY**

Conducted by
**SecuritySales
& Integration**

Western Digital 

PROJECT SUMMARY / METHODOLOGY

PURPOSE: Identify key video surveillance systems and camera storage trends

SURVEY TARGET: Commercial security systems integrators

AUGUST 2021: Survey deployed

SEPTEMBER 2021: Survey closed

OCTOBER 2021: Results delivered

QUALIFIER QUESTION: Are you a commercial security architect, consultant or systems integrator of solutions that use some form of video surveillance AI? *(This might include, but is not limited to, facial recognition, license plate detection, camera use in healthcare, retail, for secure building access systems, crowd monitoring, smart traffic and parking control, etc.)*

Qualified Response Total: 173

What constitutes an “AI” use case to you in your security or solutions provider business?

(Choose the top three that apply.)

Far and away, security integrators view movement detection and managing building access as the leading video surveillance system applications of artificial intelligence. Next up at approximately half those responses was license plate identification and false alarm reduction.

Movement or activity detection and analysis (to detect a problem) **65.1%**

Building access via facial recognition, stranger detection, or other human ID made w/cameras **60.6%**

License plate ID (crossing bridge, entering a gate, etc.) **33%**

Reduce potential false alarms to intrusion detection (human vs. animal vs. other objects) **31.2%**

Retail sites (grab and go) where payment is made by camera ID **24.8%**

Forensic analysis of recorded video **18.3%**

Traffic monitoring **10.1%**

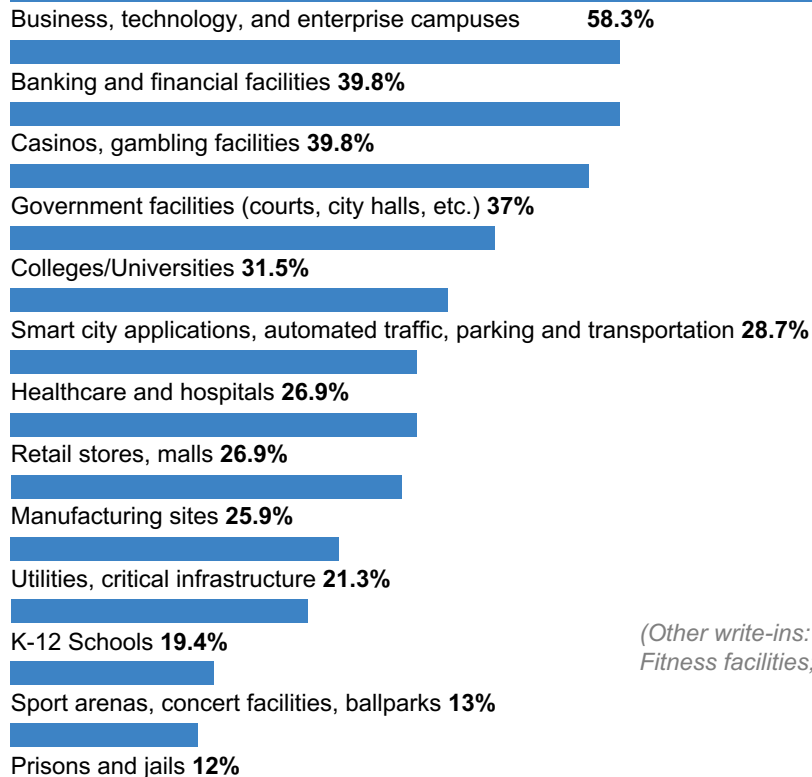
Medical predictive diagnostics/analytics **6.4%**

(Other write-ins: Behavioral recognition or anomalies; Natural language interfaces)

Where do you currently see customers deploying AI-based camera systems

(Choose the top five.)

By a wide margin of nearly 20 percentage points, commercial business and tech campuses are most commonly seen by integrators as verticals deploying some level of video-based AI. Gaming and financial institutions tied for the next most popular use cases.

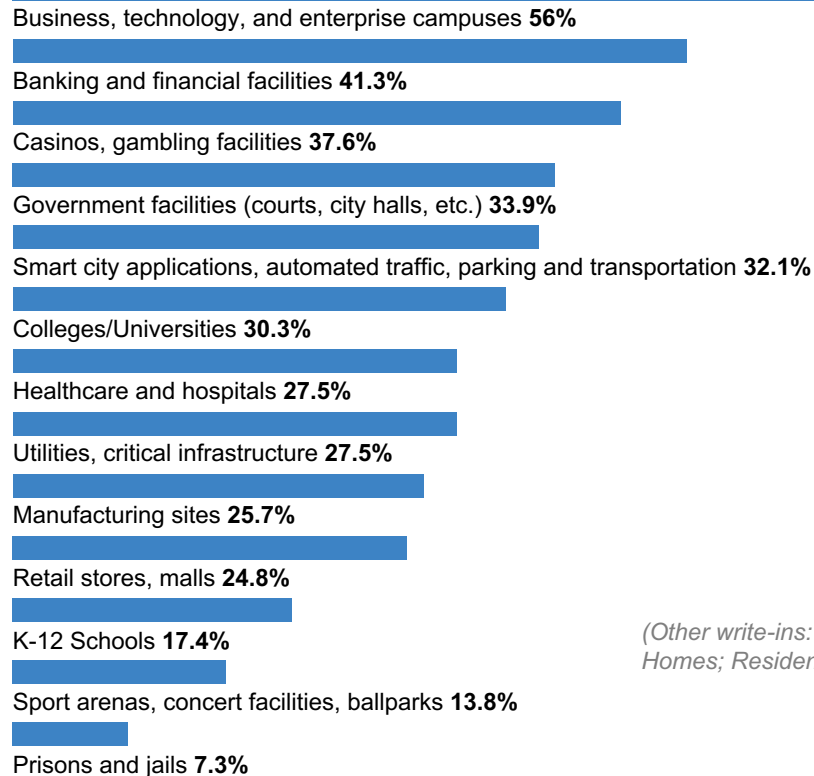


(Other write-ins: Auto dealerships;
Fitness facilities; Residential)

What vertical is showing the most rapid adoption of AI?

(Choose the top five.)

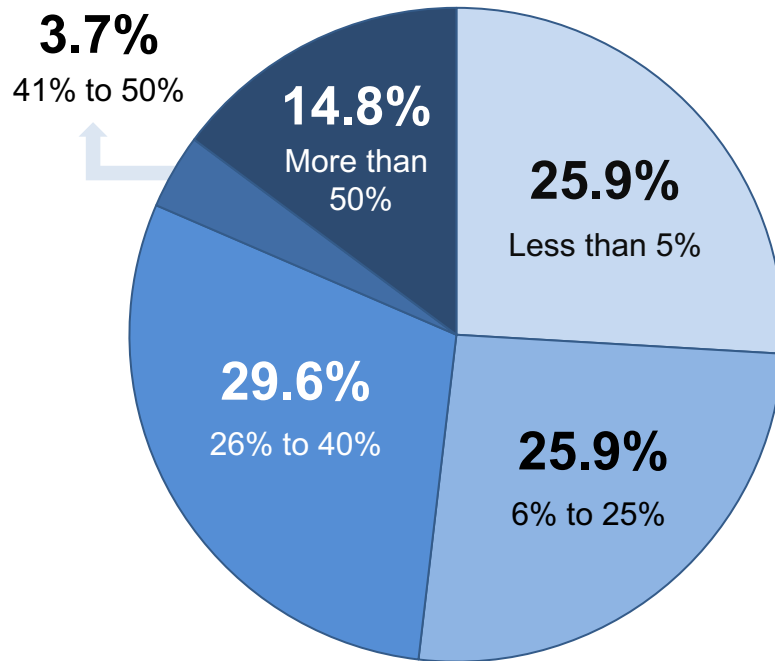
The commercial business/tech campus and financial institution markets are seen by integrators as the vertical markets most openly embracing and adopting the use of AI in their video security solutions. The rest were closely clustered, with the gaming vertical leading the charge.



(Other write-ins: Fitness facilities; Homes; Residential)

What percentage of video/surveillance systems have you deployed in the last 6 months that offer AI?

Almost half (48.1%) of the responding security integrators report deploying video solutions that incorporate AI in at least 25% of their projects during the past six months. Close to 15% say AI is a component in most of their deployments.



Why are your deployments of AI systems increasing?

(Choose two.)

There was little separation among the leading three choices here, with better camera resolution allowing deeper data analysis topping the list by 2.8 percentage points. Pricing, while still significant, only registered fourth.

Increase due to higher camera resolutions, and what can be seen/done with the data **43.5%**

Increase due to customer need to learn more from data, and to deploy new use cases **40.7%**

Increase due to greater understanding of use cases & wider selection of new equipment **39.8%**

Pricing is becoming more favorable for end users **30.6%**

Does not apply (number of systems deployed are the same or not growing) **13%**

What problems are AI-based video security systems helping customers solve?

(Select your top three choices.)

Reducing critical event response time and deeper data analysis leading to improved decision accuracy are the leading advantages integrators say AI is affording their end-user clients. Gleaning business intelligence and more efficient use of manpower tied for next in line.

Reduce response time to critical events **64.2%**

Enable more sophisticated analysis of rich data to improve accuracy of decisions **58.7%**

Analyze patterns from visual data to improve business intelligence **45.9%**

Enhance utilization of security personnel **45.9%**

Allows our company to offer valuable, new services **24.8%**

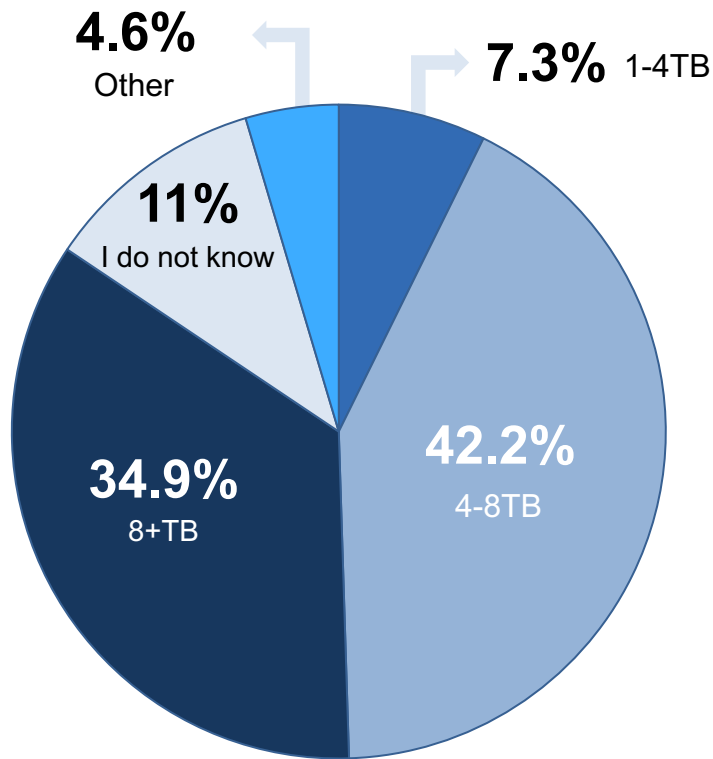
Our company doesn't believe AI is important for today's use cases, or too soon to say **7.3%**

Other **3.7%**

(Write-ins: People counting and loitering; Cost of hiring extra staff is saved; More precise decision-making, eliminate mistakes)

What storage capacity ranges are typical for AI video surveillance solutions you deploy?

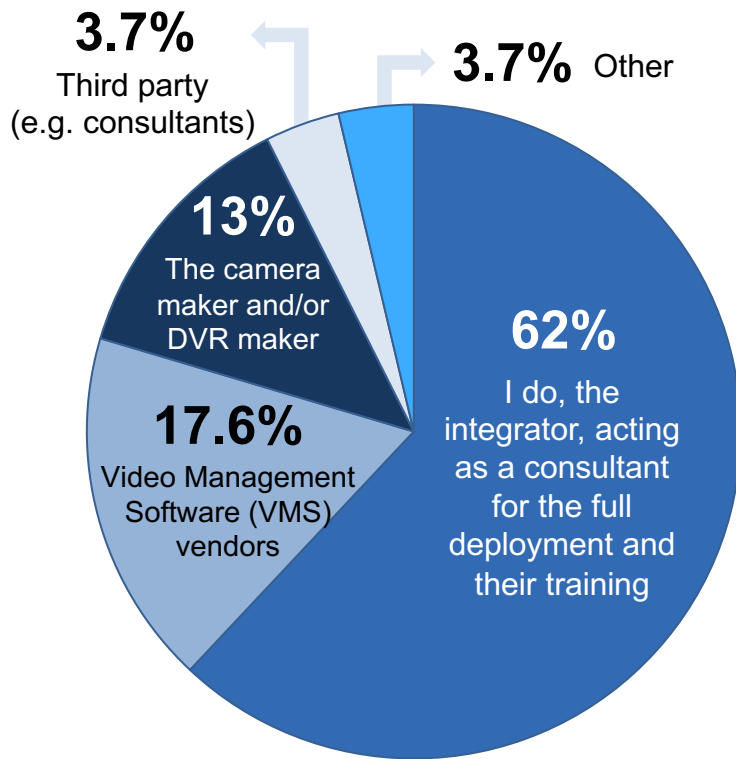
While nearly 77.1% of responsive integrators say their AI-based video surveillance solutions utilize at least 4TB of data storage, most say their data storage is within the 4-8TB range. Interestingly, 11% of responsive integrators stated they do not know their projects' storage capacities.



*(Write-ins: Cloud-based;
No different than standard
VMS systems; Depends on
the application)*

Who educates your customers/end users on how to utilize and enable AI in their smart video systems?

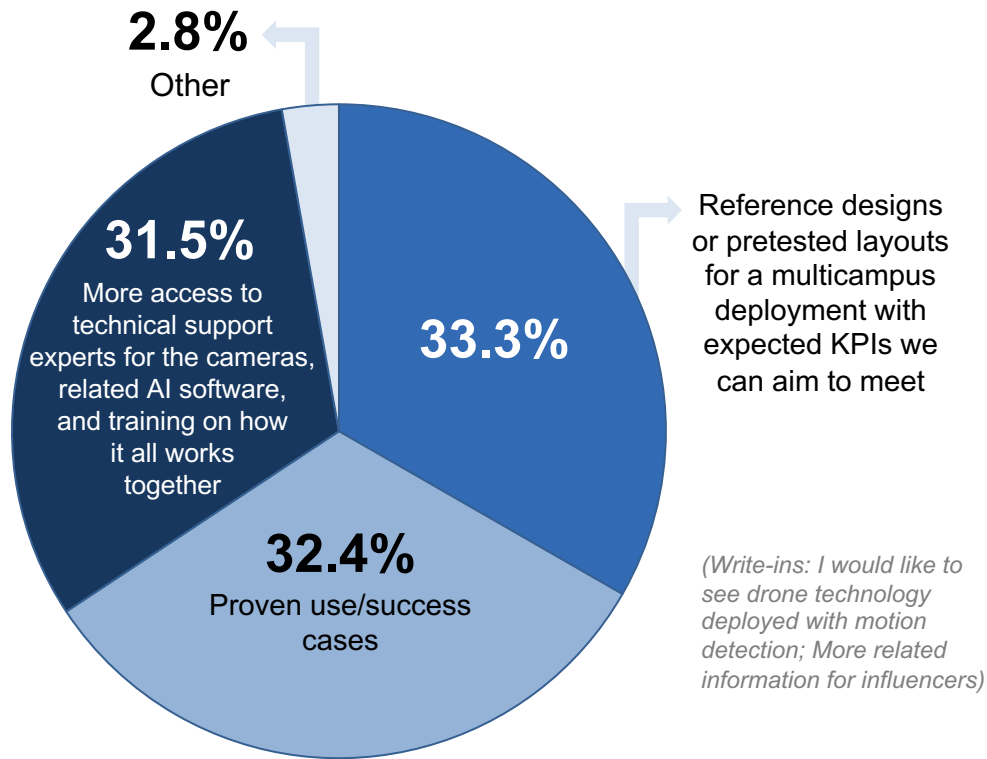
Overwhelmingly, security integrators take it upon themselves to educate their end-user clients on the capabilities and daily use of AI-enabled video systems.



(Write-ins: All of the above; Institutes & universities are very important; Learning AI myself as I go)

What information would be most useful to educate your customers and increase demand for AI?

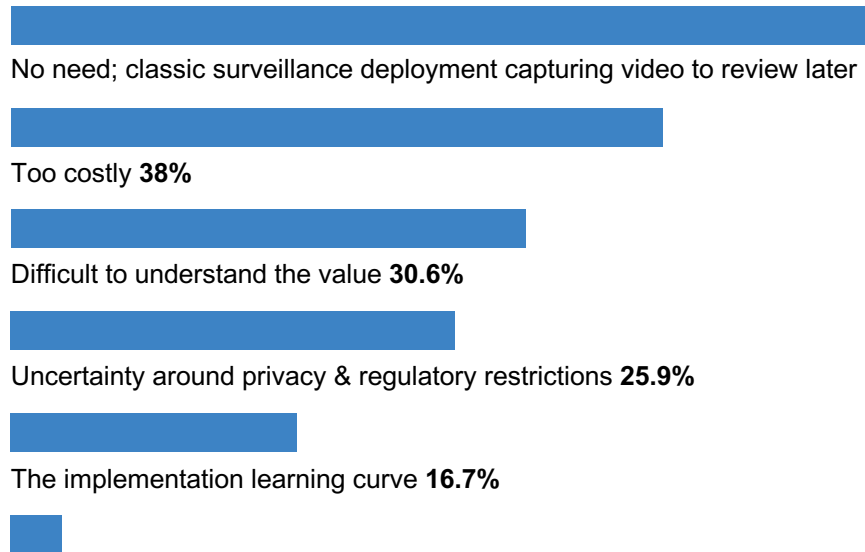
The results here show many categories of useful information, with reference designs, proven use cases, and more tech support all receiving significant affirmation. One respondent wrote in a comment regarding enhanced drone technology.



What are the most common reasons customers say they do not want AI?

(Select your top two choices.)

According to 50% of responding integrators, customers commonly decline AI surveillance technology because they believe traditional video surveillance is good enough. Interestingly, integrators' responses that customers believe AI systems are too costly (38%) is slightly higher than why integrators see AI system deployment increasing (30.6%), as discussed earlier (see Slide 7).



No need; classic surveillance deployment capturing video to review later is good enough **50%**

Too costly **38%**

Difficult to understand the value **30.6%**

Uncertainty around privacy & regulatory restrictions **25.9%**

The implementation learning curve **16.7%**

Other **3.7%**

(Write-ins: Change out of old to new; I have not encountered an issue; Racial bias)

What aspects of AI deployment do you believe customers understand the least?

(Please select top two choices.)

This result leaves little doubt that integrators believe commercial security end users need more education regarding AI's capabilities and how it can specifically add value to their organizations. The other four options were similarly responsive, with integrators believing customers misunderstanding the total cost of ownership of AI systems the most.



How AI can help their business **53.8%**

How much it will cost to install and maintain **33%**

Knowing which internal and external stakeholders need to be involved in deploying an AI-enabled system **32.1%**

Understanding of all the architectural pieces of an AI-enabled solution (specialized cameras, recorders, software/VMS, back-end storage and solutions) **27.4%**

Regulations that govern use of AI (privacy, retention, GDPR, etc.) **24.5%**



Essay Question (verbatim)

Can you offer any further views on what you would need to roll out more integrated AI solutions for customers? Think about the visual data they could be running analytics on that they are not today. What technologies or consulting services are they not using, or not using regularly? Is there interest, but too few resources, for example?

- Customer groups are interested but too few resources.
- Customers are very interested, but there are many things they don't understand. Communication is difficult.
- Provide professional guidance to customers.
- My experience has been that the drivers, integration, plugins needed to deploy AI are not fully developed or not often developed to their reported capabilities.
- The higher cost justification. AI that is not proprietary, would immediately increase AI sales as most businesses already have some form of surveillance cameras.
- Dashboard and visuals on analytic data will help customers' management make better decisions.
- Let everyone have more job opportunities.
- Next-gen platforms offer AI- and ML-based technologies as a standard component of their core products. Most of these are Cloud-based, and there are still many who fail to properly understand the true value of a Cloud-based VSaaS architecture despite using SaaS / subscription-based services for every other aspect of their lives. Security tends to lag behind the rest of the world.
- Educating and training.
- The lack of useful information and facts to the customers. Also the lack of training.
- Help convince customers that the tech works reliably — that the "catch rate" of critical events can be 90%.
- Given the rise in HR cost (especially in states like California) the value of AI is becoming more apparent.
- It mainly centers around education and cost.



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- AI is a buzzword that many stakeholders have heard, but they are still fearful of what it means. They hear different messages from all parties in the industry; manufacturers say one thing, consultants express another and integrators push a third message. All these messages around AI, but rarely finding the right solution for the customer. We need to have a better message together as well as to include how AI applications can build business intelligence over just being a shiny widget.
- Platforms that allow AI from multiple vendors on the same platform. Just like SI's offer 'best of breed' solutions, AI solutions should do the same thing.
- Face recognition and simultaneous tracking should be more advanced so operators can track the person entering the premises to exiting the premises.
- Most customers fail to realize the marketing value.
- AI solutions for each vertical application is important, and how to present and show why you need AI security assistance.
- It is always a good idea to evaluate and learn as much as possible about what the products are capable of offering. Then I recommend the end user asks questions and seek training on the products.
- It's all about the end-user interface.
- Our companies understanding it needs to come first ... training, demo system etc.
- We are on the beginning of the curve. With camera capabilities starting to include AI, we will see a rise in the use of the technology. Moving away from server-based applications to AI on the edge.
- The consulting community seems sparse on SMEs. Many customers have poor infrastructure to start with, so a discussion regarding AI should also include a discussion about infrastructure and performance management.



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