

FIFTH ANNUAL INTERNATIONAL  
**2025 CASINO SURVEILLANCE  
SURVEY REPORT**



International Association of Certified Surveillance Professionals



# TABLE OF CONTENTS

<b>Introduction</b>	<b>3</b>
<b>Key Findings</b>	<b>5</b>
<b>Section 1: Respondent Casino Characteristics</b>	<b>10</b>
<b>Section 2: Department Structure</b>	<b>13</b>
<b>Section 3: Wages and Budget</b>	<b>22</b>
<b>Section 4: Cheating Overview</b>	<b>28</b>
<b>Section 5: Advantage Play</b>	<b>35</b>
<b>Section 6: Internal Theft &amp; Fraud</b>	<b>39</b>
<b>Section 7: Operations Trends</b>	<b>47</b>
<b>Section 8: Technology</b>	<b>57</b>
<b>Section 9: Top Threats</b>	<b>67</b>
<b>Respondent Comments</b>	<b>70</b>
<b>Reliability of Data</b>	<b>75</b>

The 2025 International Casino Surveillance Survey is the fifth annual report for this important project. The survey is the first of its kind for surveillance professionals in the gaming industry. The 2025 annual survey now constitutes five years of data to add to the body of knowledge about surveillance operations and trends.

The survey is designed to find out about “the state of” surveillance departments in both Tribal and commercial casinos in the U.S., internationally, and on cruise lines. The data and analysis from this survey are tools that can help benchmark surveillance operations, issues, and trends.

### **This report includes:**

- Comparisons in key areas between the five studies conducted in 2021 through 2025 for key topics such as wages, department and training budgets, and numbers of cases of employee collusion, cheating, and advantage play;
- Additional analysis for some topics that show differences in findings based on the size of the casino, and whether it is Tribal or commercial.
- Best practices is a section that was introduced in 2024 throughout the report, and we continue that popular feature this year.
- Open-ended text comments from your fellow surveillance practitioners in the field.

The survey content was developed with extensive input from surveillance professionals. All survey participants remain anonymous, and no information is presented in the data or report that could be used to identify any participating casino.

The survey was conducted online with email invitations sent to a list of IACSP members and casino clients of eConnect and Raving Consulting Company. The survey was conducted by Debra Hilgeman, Ph.D., a senior research partner with Raving Consulting Company. Data was collected in July 2025. Analysis and reporting meet academic research standards for reliability and validity.

The survey is co-sponsored by the **International Association of Certified Surveillance Professionals (IACSP)**. The survey is also co-sponsored and funded by **eConnect**, a U.S.-based global company providing asset protection and business intelligence for the hospitality industry, and by **Tribal Gaming & Hospitality Magazine**, a division of **Raving Consulting Company** of Reno, NV, that works with casino and hospitality companies worldwide.

*The sponsors of the 2025 Casino Surveillance Survey wish to thank all the casinos and surveillance professionals who participated in this year's study. Their shared knowledge will help casinos be better equipped to succeed in this fast-changing business environment.*

*If you're a casino surveillance professional and would like to participate in next year's survey, please send an email to Derk Boss, IACSP President, at [djboss49@gmail.com](mailto:djboss49@gmail.com).*

### Responding Casino Characteristics:

- A total of 146 casino properties completed the survey. Respondents were from 32 U.S. states and Puerto Rico. 27% of respondents are from international casinos.
- 48% of participating casinos are commercial, 36% are Tribal, and 16% are cruise ships or online casinos.
- 41% of properties have more than 100,000 square feet of gaming space; 32% have 50,000-100,000 sq. ft.; 26% have less than 50,000 sq. ft.  
**(These three categories of casino size are used throughout the 2025 report for comparison analysis.)**
- 60% of properties have more than 200 hotel rooms; 12% have none.
- **The sample of casino respondents in 2025 is similar to the 2021-2024 studies, so comparisons are reliable between the five survey reports.**

### Department Structure:

- Overall, 50% of casinos say access to top management is excellent; 9% say access is very limited or nonexistent.
- 51% of commercial casinos have “excellent access” to top management compared with 41% of Tribal casinos.
- The total number of agents/observers shows 53% overall as having more than 15.
- The total number of supervisors shows 43% overall as having more than three.
- The total number of technical personnel shows 39% overall as having more than two.
- 9% of casinos under 50,000 sq. ft. have no technical personnel.

### Wages and Budget:

- For the fifth consecutive year, there was an annual **increase in the hourly wage rate category of \$20 or more per hour for agents/observers — from 17% of all casinos in 2021 paying at this rate, to 50% in 2025**. The average annual salary for a supervisor, in the category of **\$50,000 and up**, increased from **41% in 2024 to 51% in 2025**.
- For casinos under 50,000 sq. ft., 36% have an hourly wage of less than \$15 for agents/observers, and 33% pay more than \$20 per hour. For casinos with more than 100,000 sq. ft., 2% have an hourly wage less than \$15, and 51% pay more than \$20 per hour.
- For casinos under 50,000 sq. ft., 19% have an annual wage over \$50,000 for supervisors. For casinos with more than 100,000 sq. ft., 65% have an annual wage in this range.
- In 2025, 24% of casinos under 50,000 sq. ft. had a department budget of \$500,000 or under. In aggregate data, 12% of all casinos had a department budget of \$500,000 or under, compared to 20% in 2024.
- In 2025, 50% of casinos less than 50,000 sq. ft. had a training budget over \$5,000, which is more than double the 22% of casinos this size in 2024 with a training budget over \$5,000.**

### Cheating Overview:

- In 2025 aggregate data, 25% of casinos had more than 15 cheating events annually, which shows no change from 2024.
- In 2025 aggregate data, 35% of casinos had five or fewer cheating incidents annually, a decrease from 41% in 2024.
- 82% of respondents reported cheating events in table games, followed by 38% in slots, comparable to the previous year.
- The highest percentage of cheating incidents (29%) was from players within the state.
- The highest percentages for duration of a cheating incident are lone time only (46%), followed by less than six months (36%). The lowest percentage is more than one year (2%).
- The highest percentage of response to a cheating detection is trespassing/ejection/barring (72%). The lowest is no response (4%).
- The highest percentage of average amount of loss per incident (49%) is less than \$1,000 by all size casinos in the 2025 data.
- **80% of all casinos said 10% or less of cheating incidents involved employee collusion, which is unchanged from 2024.**

### Advantage Play:

- There were cases of 20 or more advantage play incidents each year from 2021 to 2024, **with a slight decrease from 37% in 2024 to 34% in 2025.**
- 3% of casinos under 50,000 sq. ft. had 20 or more incidents of advantage play in 2024, and this increased to 9% in 2025. The total number of respondents who did not know how many cases of advantage play they had annually remained the same in 2025 at 5%.
- The category with the highest percentage of average amount of loss per incident is \$1,000 to \$5,000 at 40% of all casinos, compared to 43% in 2024. 29% of all casinos reported losses of under \$1,000 in 2025, the same as in 2024.

**Internal Theft/Fraud:**

- In aggregate 2025 data, 12% of casinos reported no cases of employee theft/fraud, which is slightly higher than 2023 (9%).
- Overall, the highest category of internal theft/fraud is one to five incidents annually (48%).
- **In 2025, 32% of casinos with less than 50,000 sq. ft. of gaming space reported zero cases of internal theft/fraud, a significant increase from 24% in 2024, and 13% in 2023.** 2% of casinos with more than 100,000 sq. ft. reported no cases in 2025.
- Food and beverage continues to be the area where most cases of internal theft/fraud are detected: 64% in 2025, compared to 80% in 2024 and 73% in 2023.
- Primary means of detecting employee theft/fraud is **surveillance investigation/audit at 68% compared to 80% in 2024.**
- The highest category percentage for average amount of loss is less than \$1,000 at 56%, compared to 51% in 2024.
- 78% of detected internal theft/fraud result in termination in 2025, compared to 84% in 2024.

**Operations Trends:**

- The most important focus of surveillance personnel and resources is table games, followed by guests the same as in 2024.
- The highest category of available time spent on live patrol is 51-75% (27% of properties, compared to 24% in 2024).
- The highest category of available time spent on reviews is 21-30% (23% of properties, compared to 26% in 2024).
- The highest category of available time spent on video audits is 11-20% (32% of properties, the same as 2024).
- The highest category of available time spent on information analysis is 0-10% (37% of properties, compared to 38% in 2024).

### Technology:

- **53% of properties overall use facial recognition technology, which has steadily increased every year, and more than doubled from 2021 (25%).**
- The percent of properties that use facial recognition technology and report a “fairly large” or “huge” impact has increased from **14% in 2021, to 28% in 2024, and 50% in 2025.**
- 58% of properties that do not have facial recognition technology plan on adding it, down from 64% in 2024. The percentage was 50% in 2023 and 36% in 2022. Of properties that don’t have facial technology and do not plan on adding it, 28% are commercial and 13% are Tribal.
- 45% of properties use an ID scan solution, compared with 50% in 2024. That difference could fall within the margin of error since there were increases in usage in 2022 and 2023. This includes 54% of commercial casinos, and 46% of Tribal casinos.
- Veridocs and Veriscan are the two most widely used ID scan solutions by survey respondents.

### Top Threats:

- Internal theft/fraud continues to be the top threat in 2025 (87%) compared to 92% in 2024. The second most serious threat again in 2025 is cheating, 61% compared to 65% in 2024.
- **Cyber threats ranked at 44% in 2025, compared to 54% in 2024.**

# SECTION ONE

## RESPONDENT CHARACTERISTICS

### 2025 SURVEY RESPONDENTS

“As the researcher on this project since its inception five years ago, it becomes more valuable every year. With five years of reliable data from casino properties worldwide, we can see trends evolving. We also saw an increase in 2025 to 146 properties in the U.S. and abroad. What continues to make the data reliable is that the professionals who complete the survey are representative of all casinos worldwide. There is geographic diversity, and commercial and Tribal properties in every size category. For key questions, we conducted a crosstab analysis by the three categories of gaming space. This provides gaming professionals with data that fits their unique property.”

**Debra Hilgeman, Ph.D., Raving Senior Partner – Research**



48% of participating casinos are commercial  
36% are Tribal casinos  
16% are cruise ships or online

A total of **146 surveys were completed**. There is one survey respondent per property.

Responses came in from **32 U.S. states and Puerto Rico, compared to 25 states in 2024**.

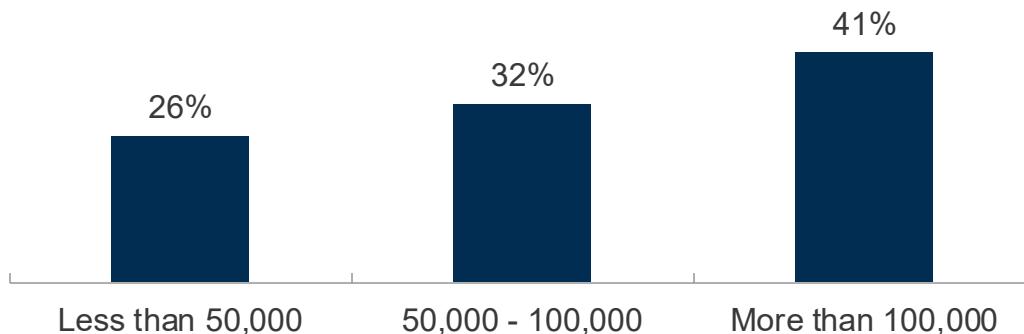
The top three states are:

- **Nevada**
- **California**
- **Washington**

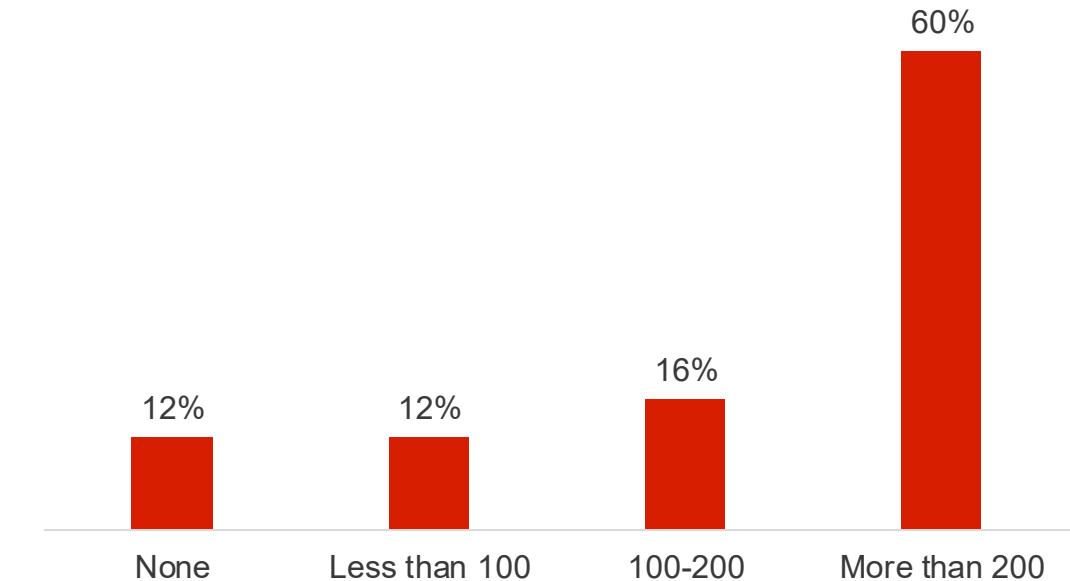
27% of respondents are from outside the United States: Australia, Bahamas, Bermuda, Canada, India, Panama, China, Malta, Mexico, Morocco, New Zealand, Nigeria, and the Philippines.

### Square feet of gaming space

These three categories  
are used for further  
analysis in key questions



### Number of hotel rooms



## SECTION TWO

# DEPARTMENT STRUCTURE

### EXPERT OPINION:

“In 2025, access to top management in commercial casinos rebounded to pre-2024 levels, signaling renewed emphasis on direct surveillance input in operational decision-making. The disparity between commercial (51%) and Tribal (41%) casinos persists, indicating that some properties still underutilize surveillance expertise at the executive level. Staffing growth among agents/observers and supervisors suggests a recognition of expanded operational demands – particularly in compliance, investigations, and guest safety. However, the decline in technical personnel and the rise in properties with no dedicated technical staff point to a reliance on third-party vendors or IT departments for complex system management. This reflects the growing sophistication of surveillance systems, multi-platform integrations, and an industry-wide trend toward outsourcing technical functions.”

**Derk J Boss, CFE, CPP, CSP**  
**President, IACSP**



## SECTION TWO

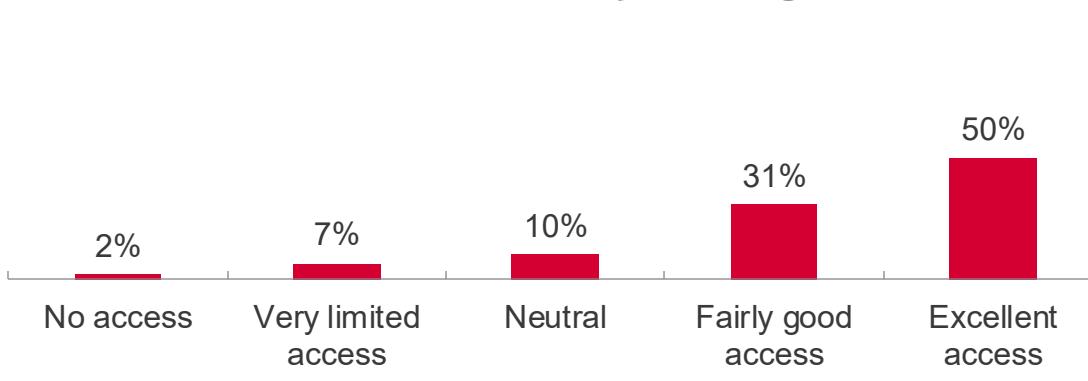
# BEST PRACTICES



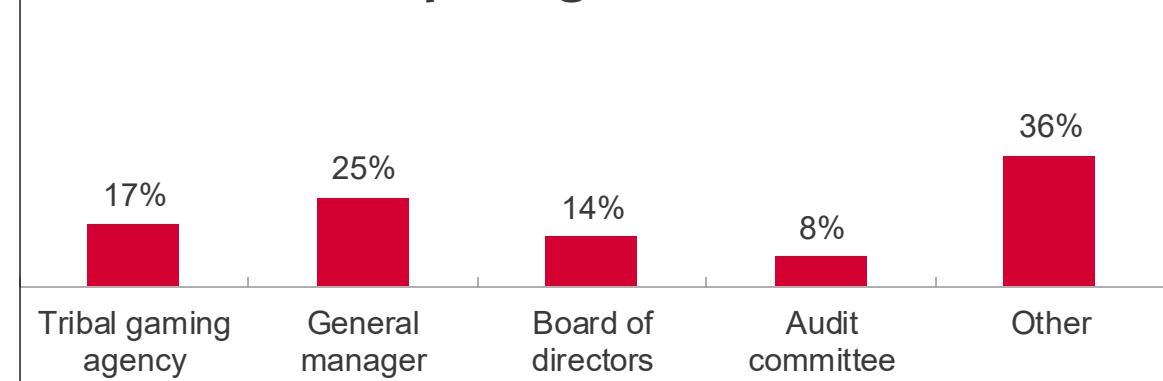
**Recommended best practices** to improve access to top leadership and increase staffing levels:

1. Establish recurring cross-departmental coordination meetings with defined action items for surveillance integration in departmental priorities.
2. Deliver concise daily executive summaries with operational metrics, incident highlights, and risk mitigation actions taken.
3. Implement role specialization within surveillance – assigning staff to focus areas such as regulatory compliance, investigative analysis, and high-risk operational monitoring—to justify headcount increases.

### Level of access to top management

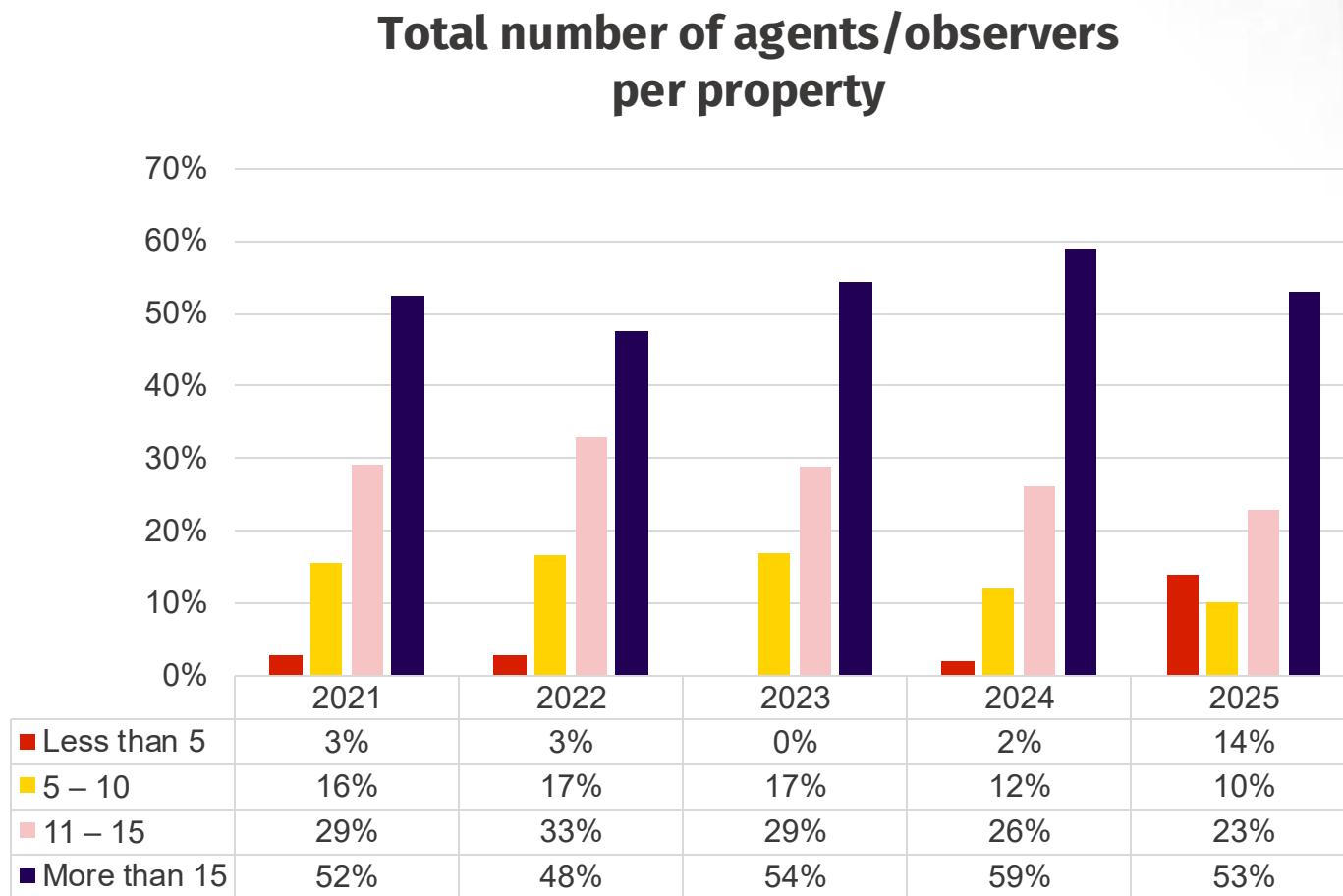


### Reporting structure



**Management  
Access:  
Commercial &  
Tribal**

2025: **51%** of commercial casinos have “excellent access” to top management compared to **41%** of Tribal casinos.  
 2024: **38%** of commercial casinos have “excellent access” to top management compared with **38%** of Tribal casinos.  
 2023: **52%** of commercial casinos have “excellent access” to top management compared with **42%** of Tribal casinos.  
 2022: **68%** of commercial casinos have “excellent access” to top management compared with **38%** of Tribal casinos.  
 2021: **52%** of commercial casinos have “excellent access” to top management compared with **49%** of Tribal casinos.



## SECTION TWO: DEPARTMENT STRUCTURE

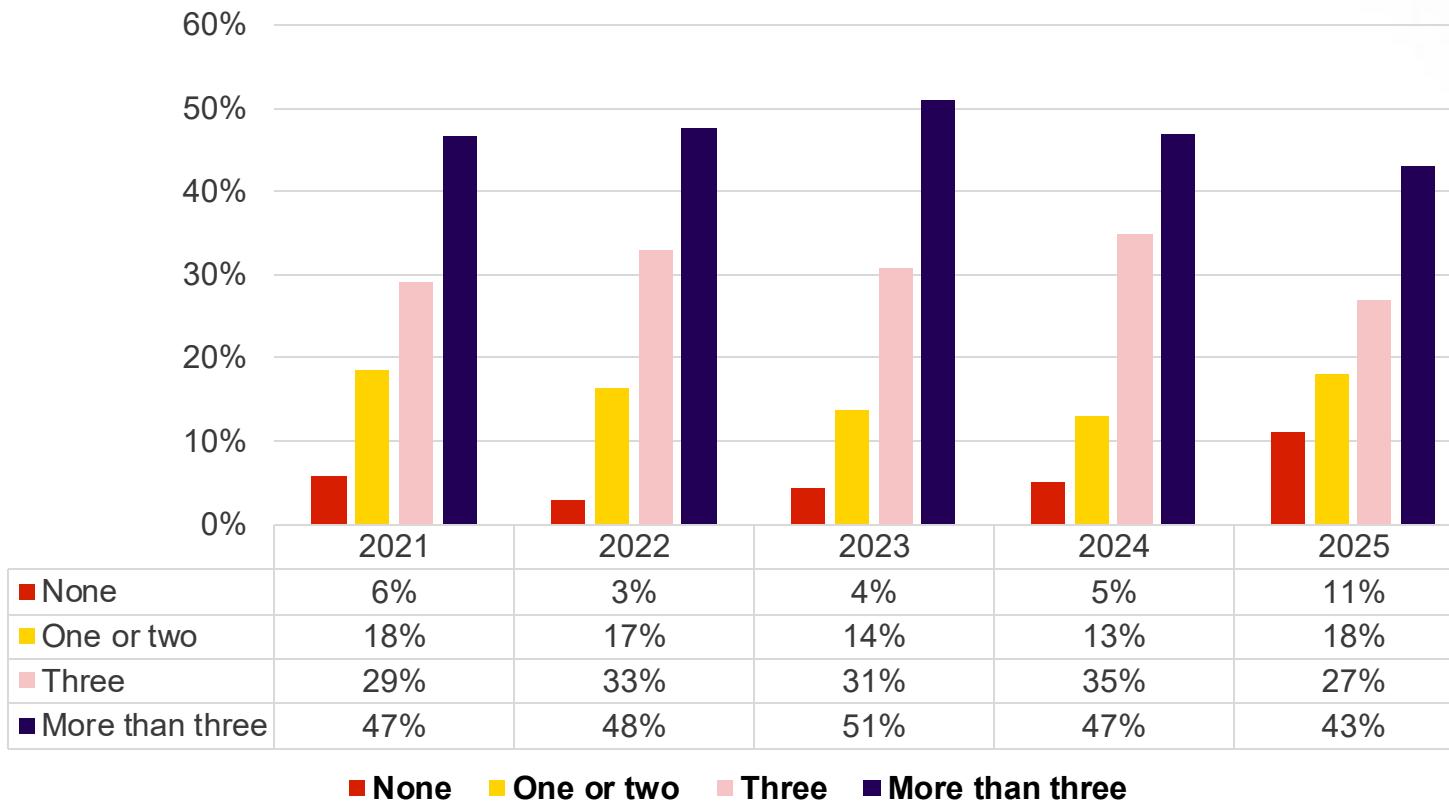
### 2025: Total number of agents/observers per property

*Analysis by square feet of gaming space*

Agents/ Observers	Less than 50,000	50,000 – 100,000	More than 100,000
Less than 5	50%	0%	0%
5 – 10	23%	13%	1%
11 – 15	15%	40%	20%
More than 15	13%	47%	79%

## SECTION TWO: DEPARTMENT STRUCTURE

### Total number of supervisors (other than director/manager)



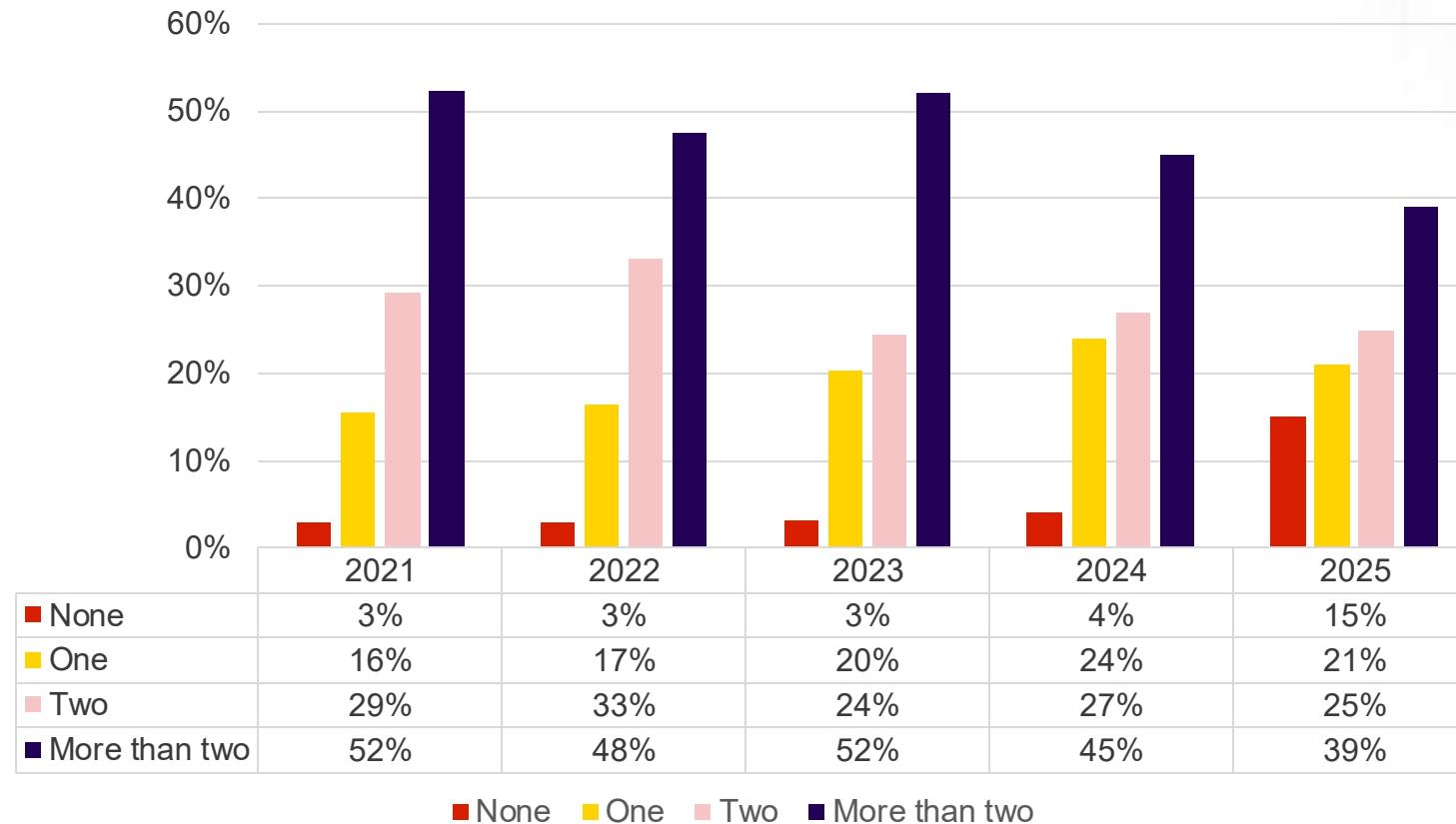
### 2025: Total number of supervisors (other than director/manager)

*Analysis by square feet of gaming space*

Supervisors	Less than 50,000	50,000 – 100,000	More than 100,000
None	31%	6%	0%
One or two	40%	13%	9%
Three	13%	30%	31%
More than three	17%	51%	60%

## SECTION TWO: DEPARTMENT STRUCTURE

### Total number of technical personnel



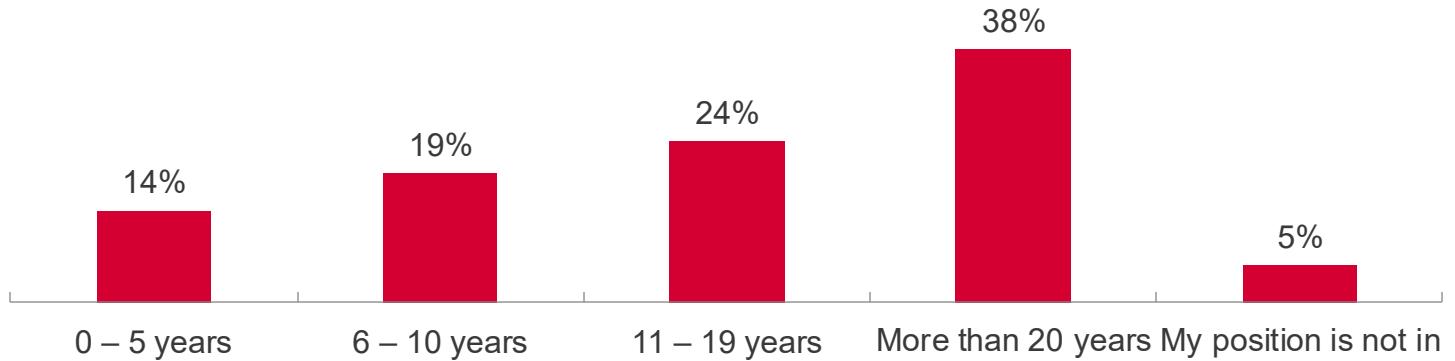
### Total number of technical personnel

*Analysis by square feet of gaming space*

Technical Personnel	Less than 50,000	50,000 – 100,000	More than 100,000
<b>None</b>	50%	2%	1%
<b>One</b>	25%	36%	7%
<b>Two</b>	13%	30%	25%
<b>More than two</b>	13%	32%	67%

## SECTION TWO: DEPARTMENT STRUCTURE

### Years of surveillance management experience



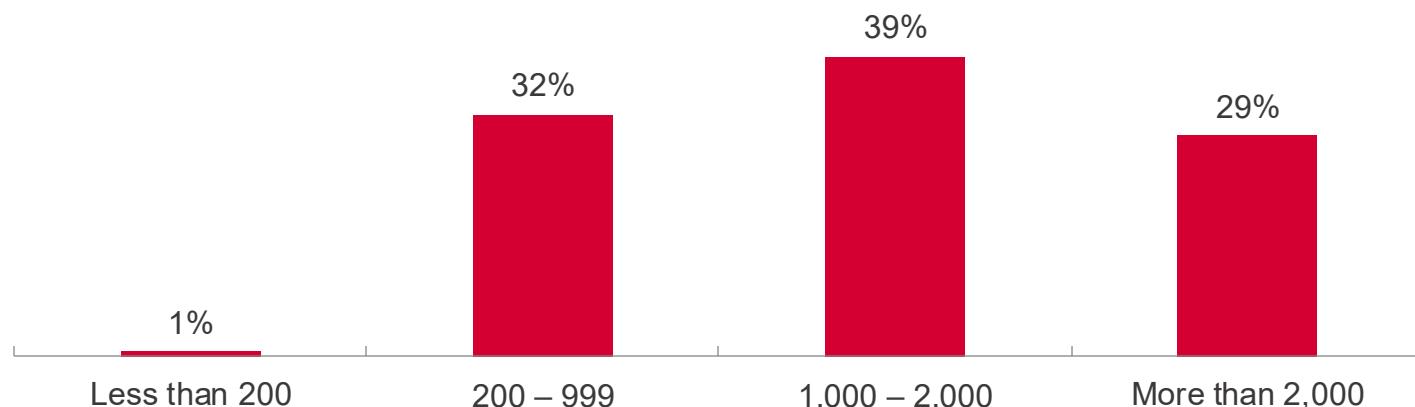
### RESPONDENT COMMENTS

*"I wish more general managers took an interest in what surveillance actually does. They always seem to have more interest in the revenue-generating departments than us."*

\*\* Respondent comments are not edited

## SECTION TWO: DEPARTMENT STRUCTURE

### Number of surveillance cameras per property



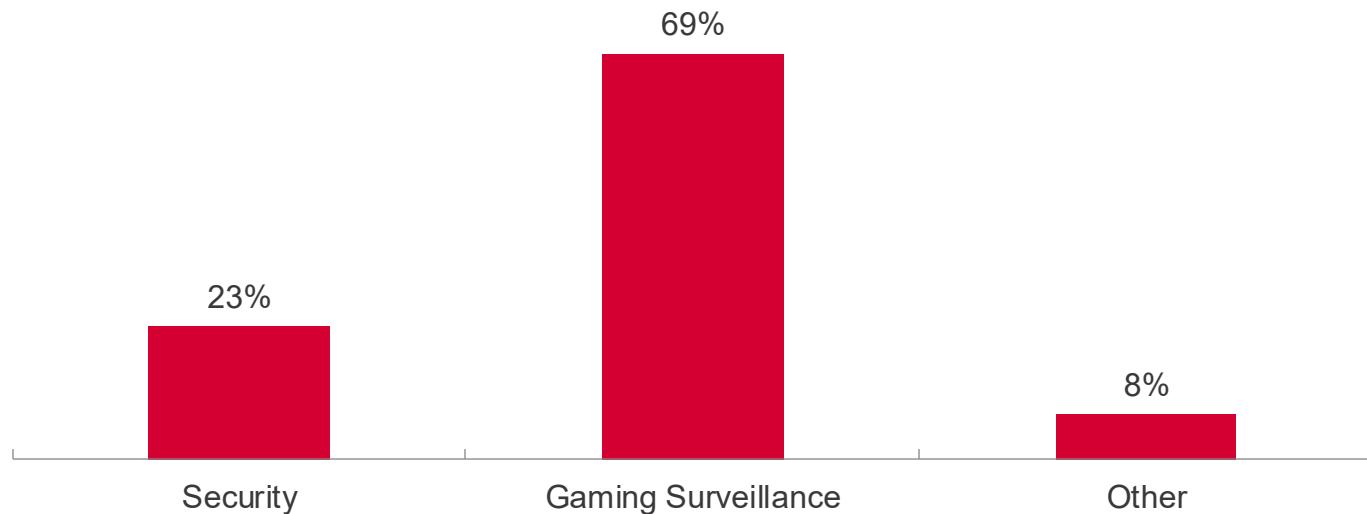
### 2025: Cameras per property

*Analysis by square feet of gaming space*

Cameras	Less than 50,000	50,000 – 100,000	More than 100,000
Less than 200	13%	0%	0%
200 – 999	48%	51%	7%
1,000 – 2,000	38%	45%	30%
More than 2,000	2%	4%	63%

## SECTION TWO: DEPARTMENT STRUCTURE

### Responsibility for hotel and parking cameras



### RESPONDENT COMMENTS

*"Too much focus on non-gaming that could be diverted to security."*

\*\* Respondent comments are not edited

# SECTION THREE

# WAGES AND BUDGET

## EXPERT OPINION:

“The steady climb in wages – particularly the 50% of agents/observers earning \$20+ per hour – marks a positive trend in retaining skilled surveillance staff. Supervisor compensation is also improving, though smaller casinos remain behind in competitive pay. Training budgets for properties under 50,000 sq ft have notably increased, which could narrow operational skill gaps between small and large properties. Department budgets show a decline in the percentage of casinos operating with less than \$500,000 annually, signaling greater institutional investment.”

**Derk J Boss, CFE, CPP, CSP**  
**President, IACSP**



## SECTION THREE

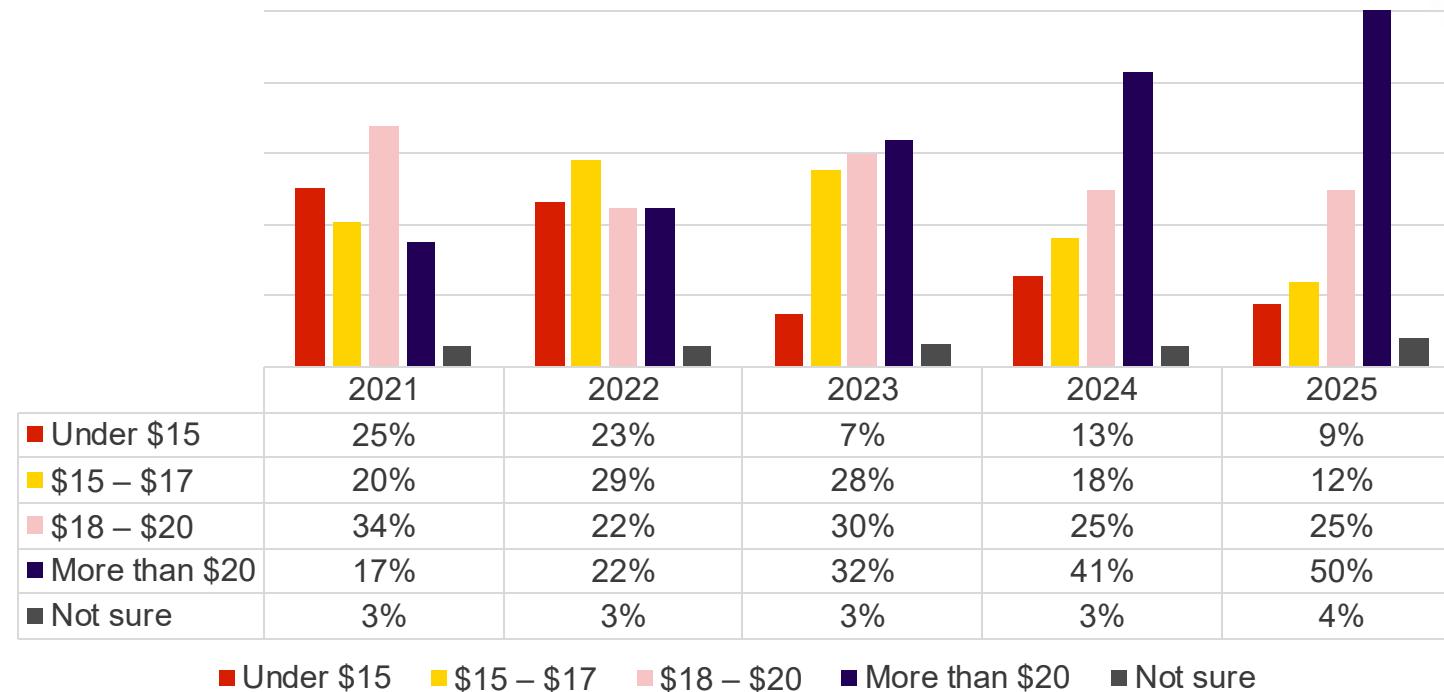
# BEST PRACTICES



**Recommended best practices** to increase wages, staff retention, and training budget:

1. Link wage progression directly to measurable training and certification achievements to reinforce skill development.
2. Create and maintain a property-specific surveillance knowledge base, supported by dedicated reading materials, peer discussions, and vendor-led workshops.
3. Develop a cross-departmental training model that incorporates gaming operations, internal audit, compliance, and AML—framing surveillance as a property-wide asset.
4. Partner with professional associations like IACSP and ASIS International to elevate industry credentials and establish benchmarking against peers.
5. Explore co-funding opportunities with surveillance, security, gaming, and marketing departments for specialized training or technology acquisition.

## 2021-2025: Average hourly rate for agent/observer



## SECTION THREE: WAGES AND BUDGETS

### 2025: Average hourly rate for agent/observer

*Analysis by square feet of gaming space*

Hourly Rate	Less than 50,000	50,000 – 100,000	More than 100,000
Under \$15	21%	8%	3%
\$15 – \$17	19%	13%	4%
\$18 – \$20	6%	33%	32%
More than \$20	51%	44%	49%
Not sure	2%	2%	12%

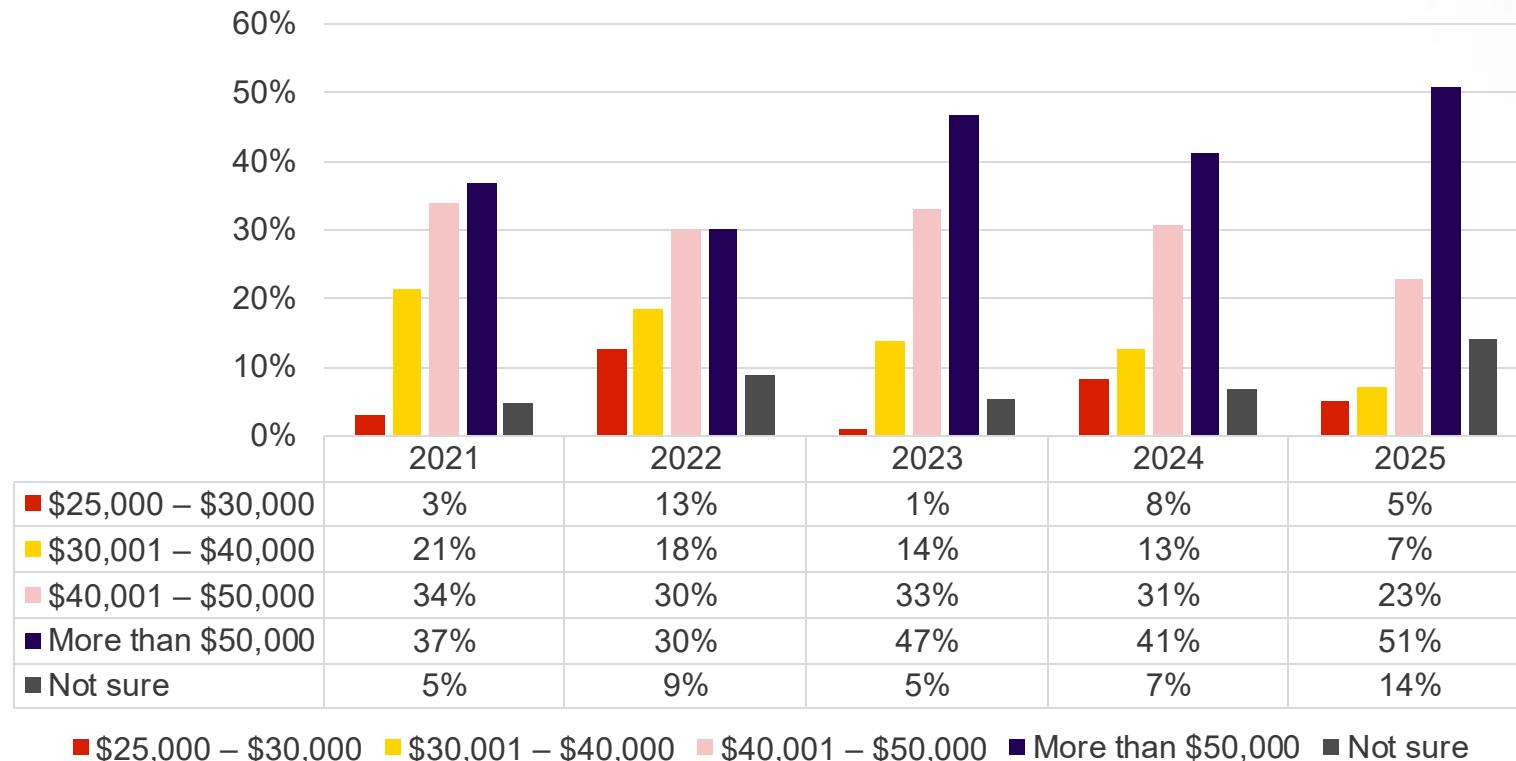
### RESPONDENT COMMENTS

*“Staffing continues to be a problem.”*

\*\* Respondent comments are not edited

## SECTION THREE: WAGES AND BUDGETS

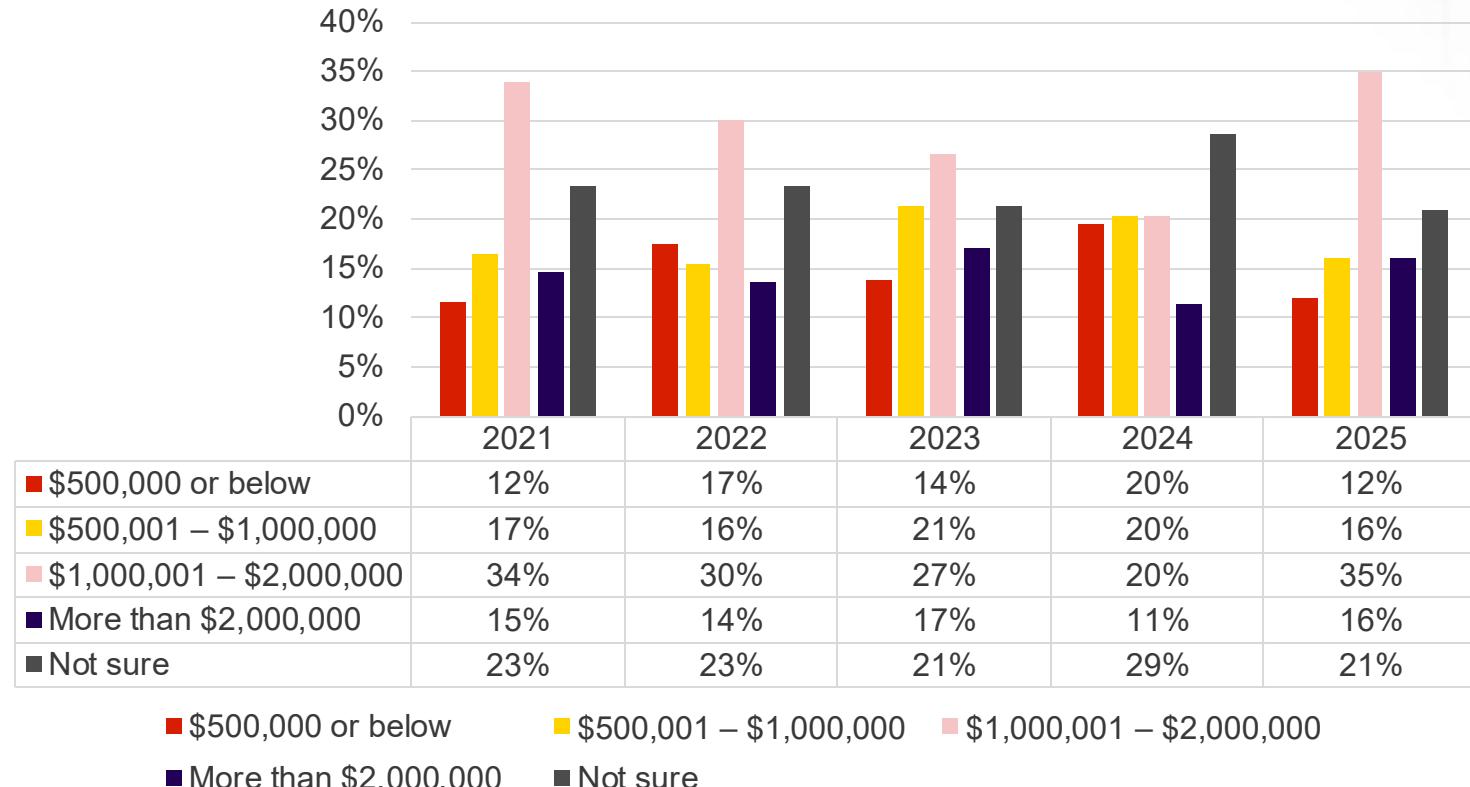
### 2021-2025: Average annual supervisor wage



### 2025: Average annual supervisor wage

Wage	Analysis by square feet of gaming space		
	Less than 50,000	50,000 – 100,000	More than 100,000
\$25,000 – \$30,000	11%	6%	1%
\$30,001 – \$40,000	9%	12%	3%
\$40,001 – \$50,000	28%	27%	16%
More than \$50,000	19%	54%	65%
Not sure	34%	2%	14%

## 2021-2025: Annual department budget



## SECTION THREE: WAGES AND BUDGETS

### 2025: Annual department budget

*Analysis by square feet of gaming space*

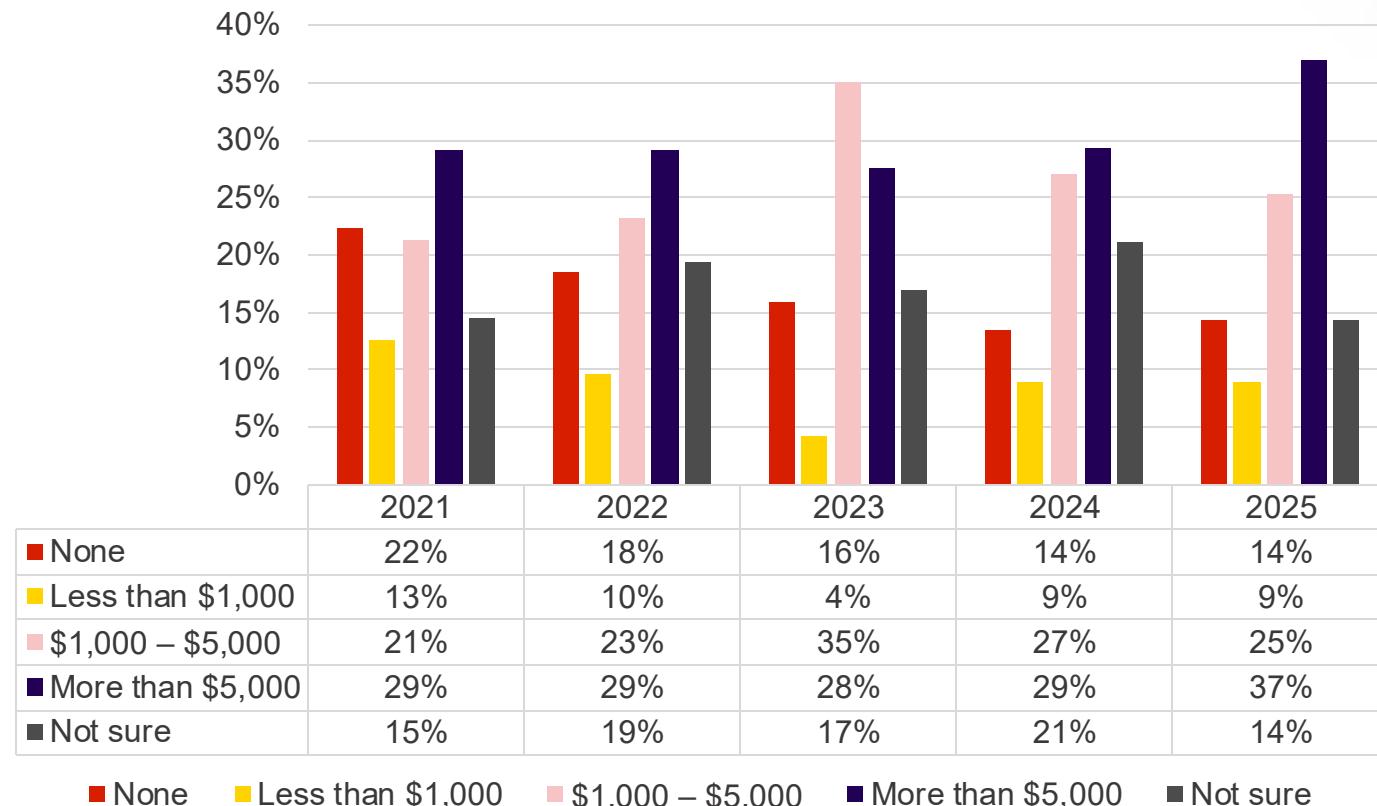
Budget	Less than 50,000	50,000 – 100,000	More than 100,000
\$500,000 or below	24%	12%	4%
\$500,001 – \$1,000,000	24%	23%	10%
\$1,000,001 – \$2,000,000	41%	35%	22%
More than \$2,000,000	4%	6%	30%
Not sure	7%	25%	33%

### RESPONDENT COMMENTS

*"It has been very difficult to hire employees with the skills necessary to do the job. Every day we perform more audit reviews and human resources special requests. Every day we get more data to analyze and evaluate."*

\*\* Respondent comments are not edited

## 2021-2025: Annual training budget



## SECTION THREE: WAGES AND BUDGETS

### 2025: Current annual training budget

*Analysis by square feet of gaming space*

Budget	Less than 50,000	50,000 – 100,000	More than 100,000
None	9%	18%	9%
Less than \$1,000	9%	12%	7%
\$1,000 – \$5,000	26%	37%	19%
More than \$5,000	50%	22%	39%
Not sure	7%	12%	25%

### RESPONDENT COMMENTS

*“The survey is critical to understand the ever-evolving landscape of Gaming Surveillance.”*

\*\* Respondent comments are not edited

## SECTION FOUR

# CHEATING OVERVIEW

### DEFINITION OF CHEATING IN THIS SURVEY:

“By cheating, we mean the actions of an individual, or a group of individuals, acting independently, or in collusion with staff members, to gain an unearned advantage over the casino by either:

- Wagering additional money after the result is known (examples: top-hatting, past posting)
- By obtaining information, by nefarious means, that could not otherwise be known (examples: card marking, filming slot machines, exploiting a card slug, card counting with a device)
- By receiving unearned benefits due to relationships with staff (examples: being paid for losing bets, being rated for no play, or using social engineering to exploit staff, or policies and procedures)

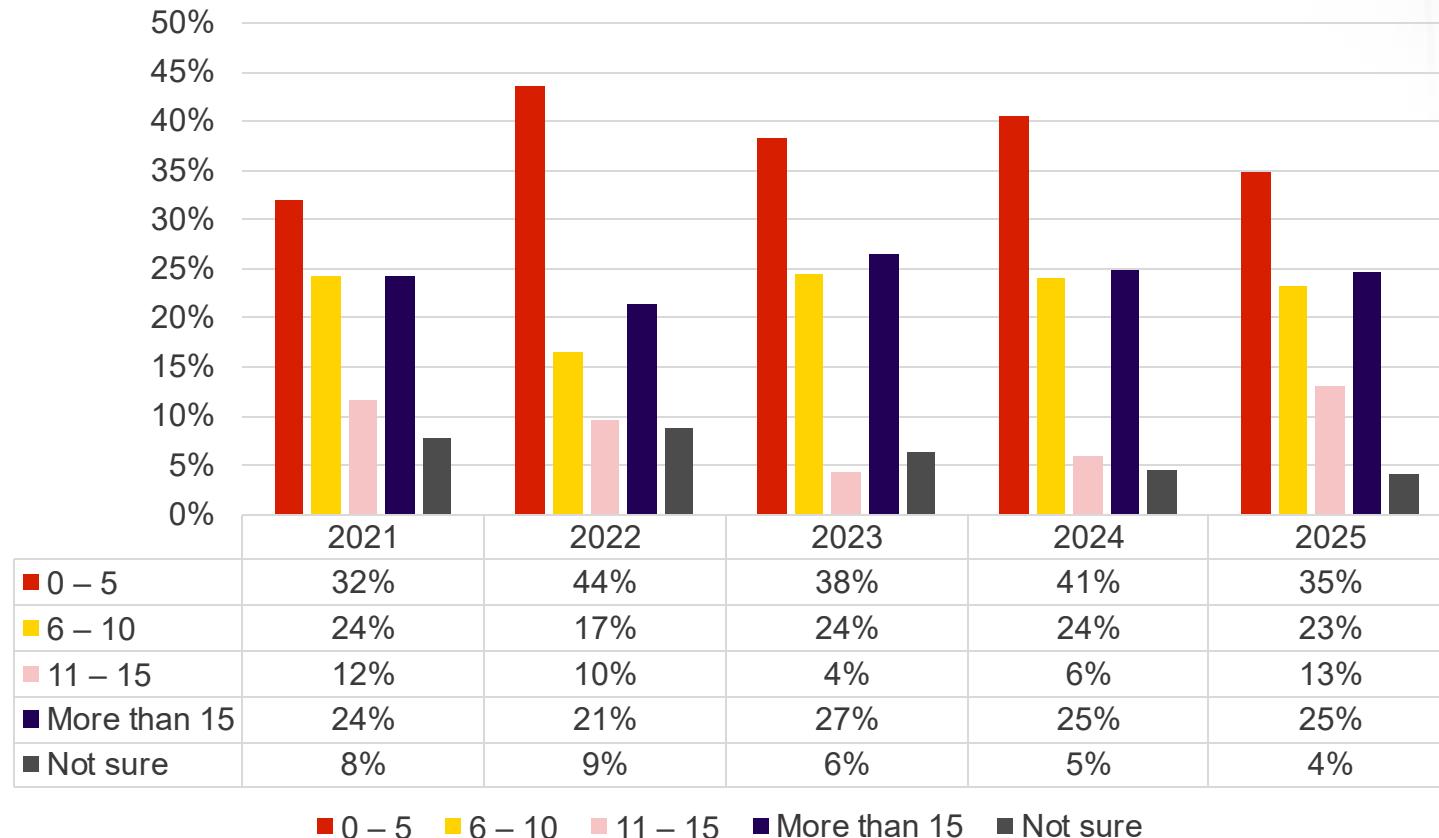
Other examples can include color-up scams, exploiting edge-sorts, and front-money scams.”

**Derk J Boss, CFE, CPP, CSP  
President, IACSP**



## SECTION FOUR: CHEATING OVERVIEW

### 2021-2025 Cheating events per property

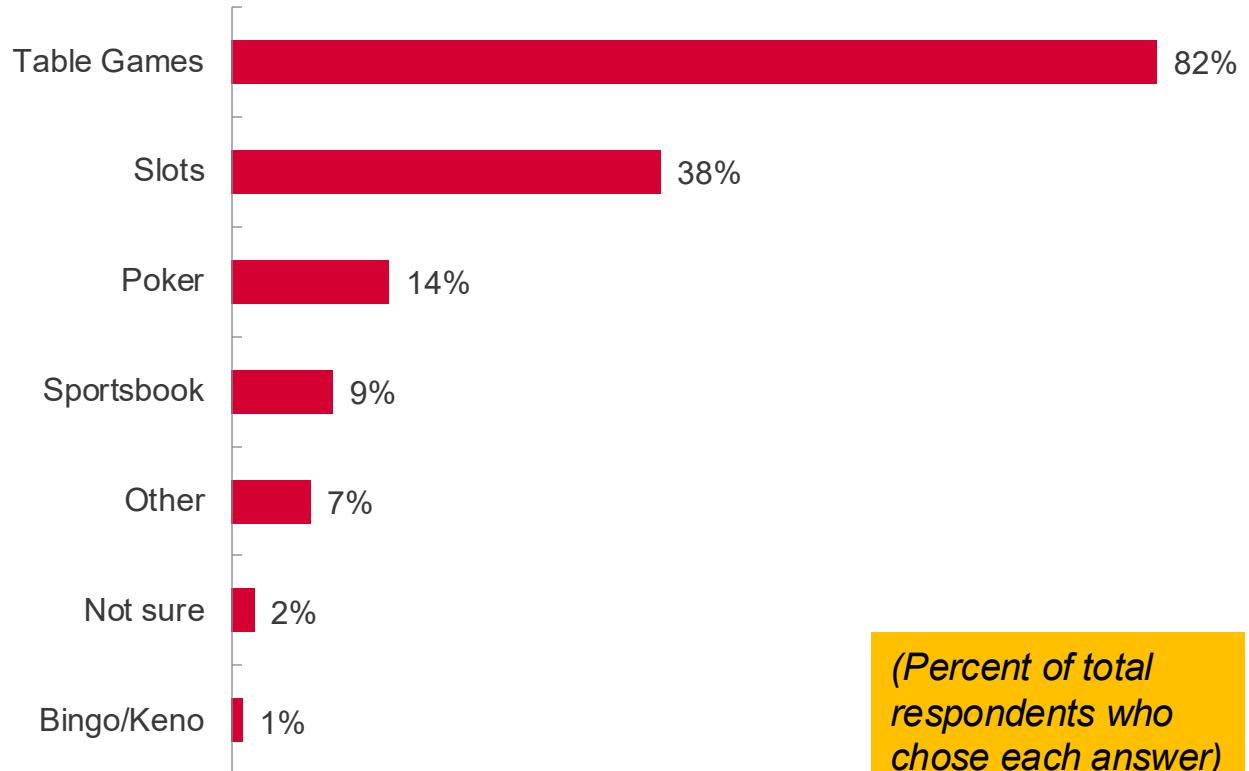


### Total cheating events in 2024

*Analysis by square feet of gaming space*

Events	Less than 50,000	50,000 – 100,000	More than 100,000
0 – 5	63%	31%	20%
6 – 10	22%	18%	27%
11 – 15	2%	12%	18%
More than 15	7%	39%	32%
Not sure	7%	0%	3%

### Where cheating occurs



## SECTION FOUR: CHEATING OVERVIEW

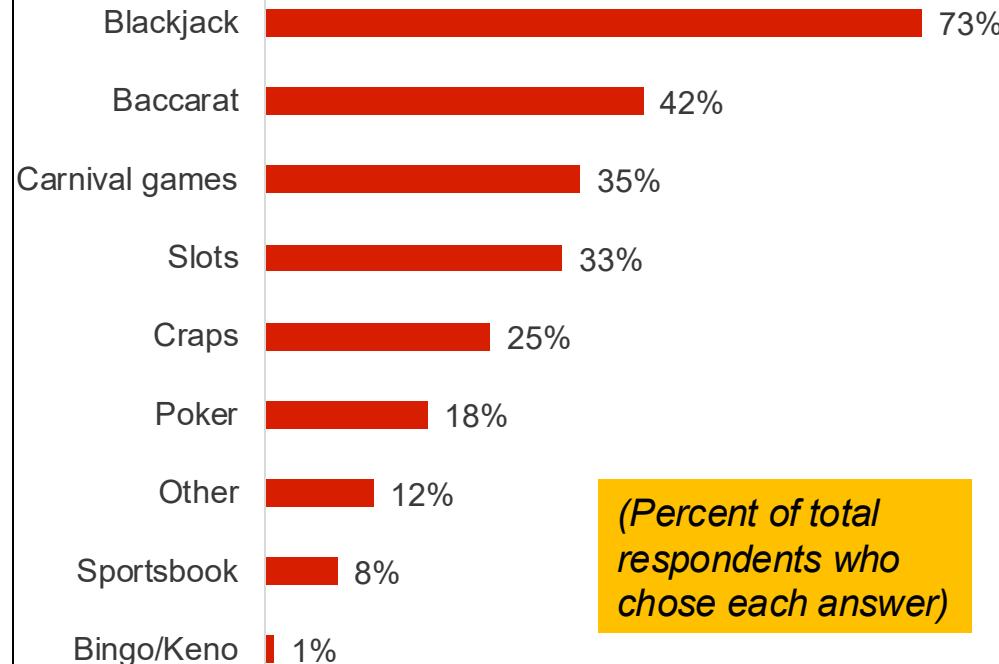


### RESPONDENT COMMENTS

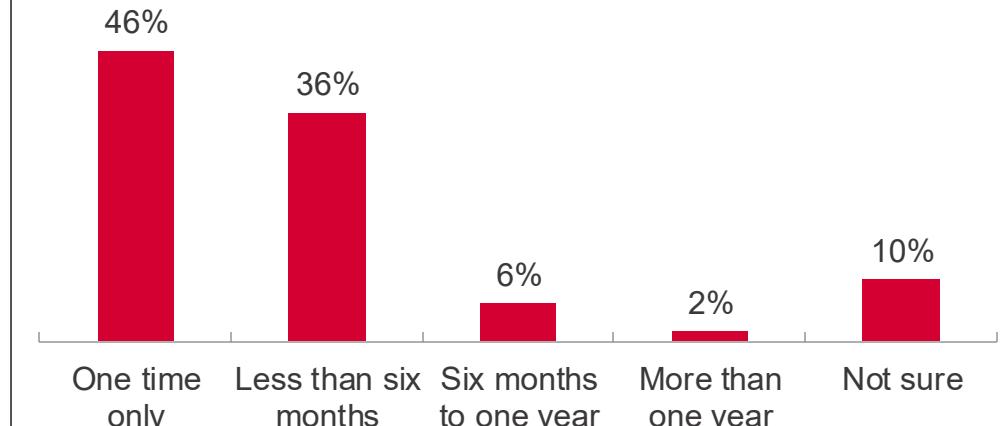
*"Increased staffing would significantly improve fraud and theft prevention; with current levels, we're reactive rather than proactive. Despite this, current staffing levels meet all requirements."*

\*\* Respondent comments are not edited

### Games where cheating occurred

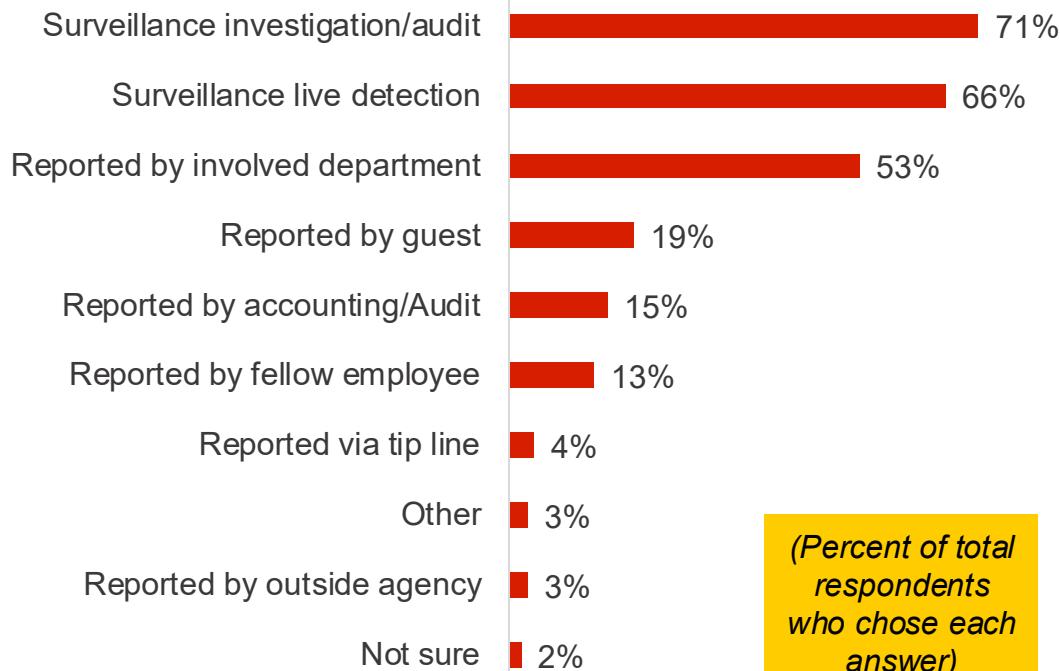


### Average duration of cheating incidents

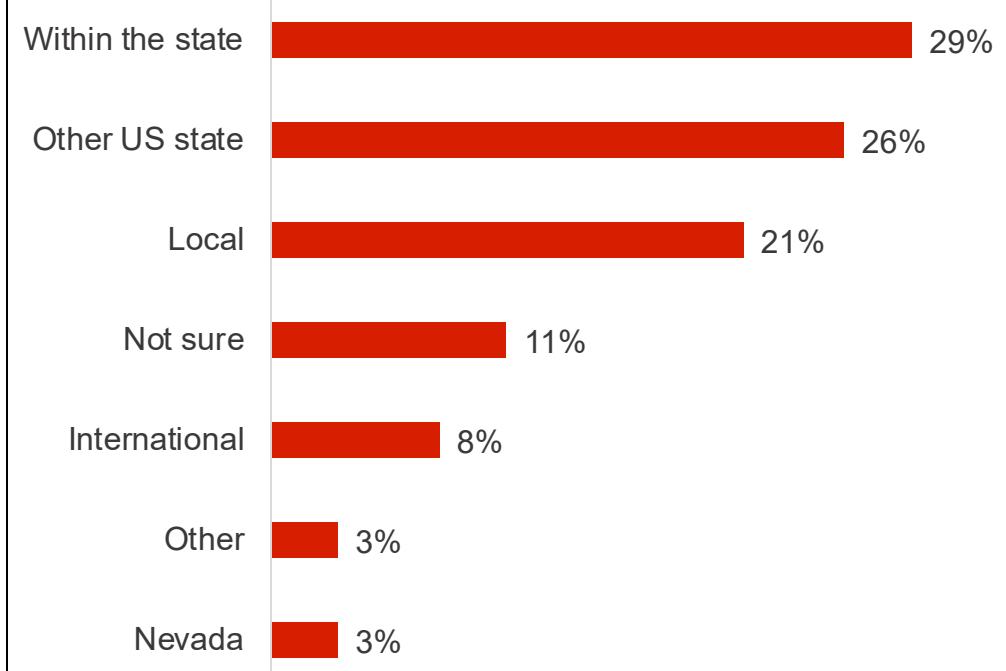


## SECTION FOUR: CHEATING OVERVIEW

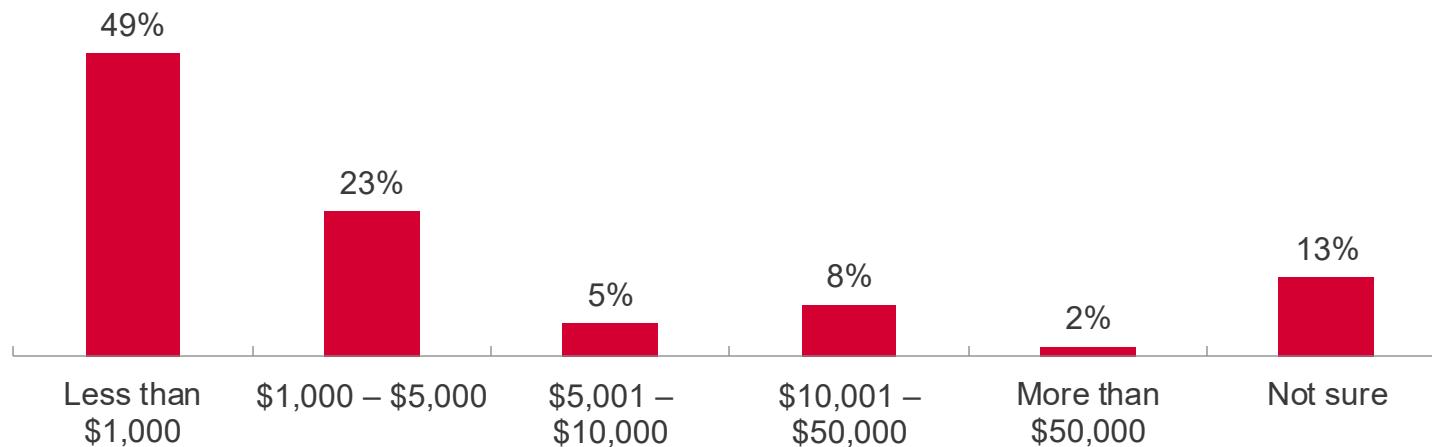
### How cheating was detected



### Where cheaters were primarily from



### Average amount of loss per cheating incident



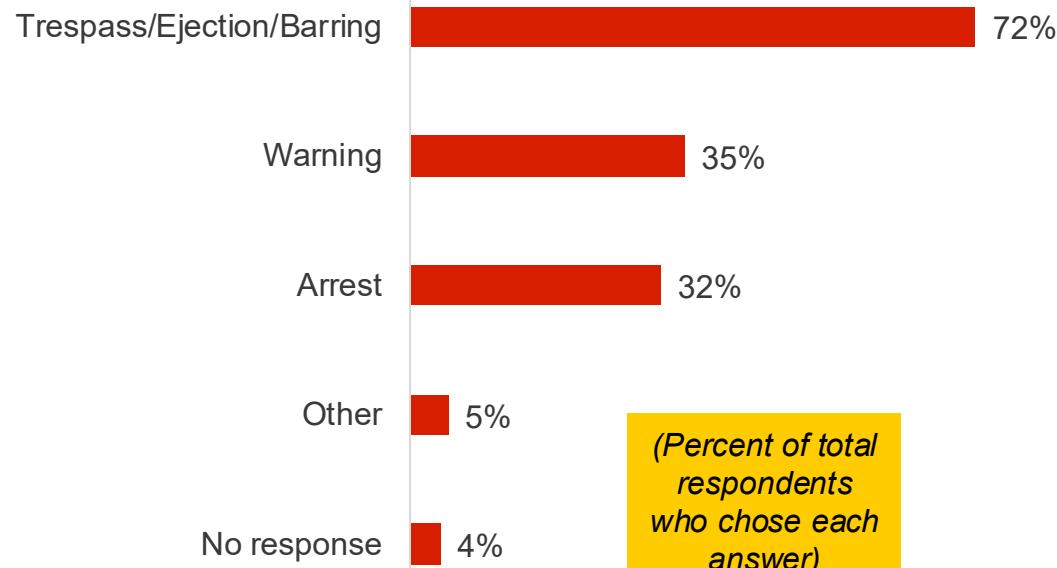
## SECTION FOUR: CHEATING OVERVIEW

### Average amount of loss per cheating incident in 2024

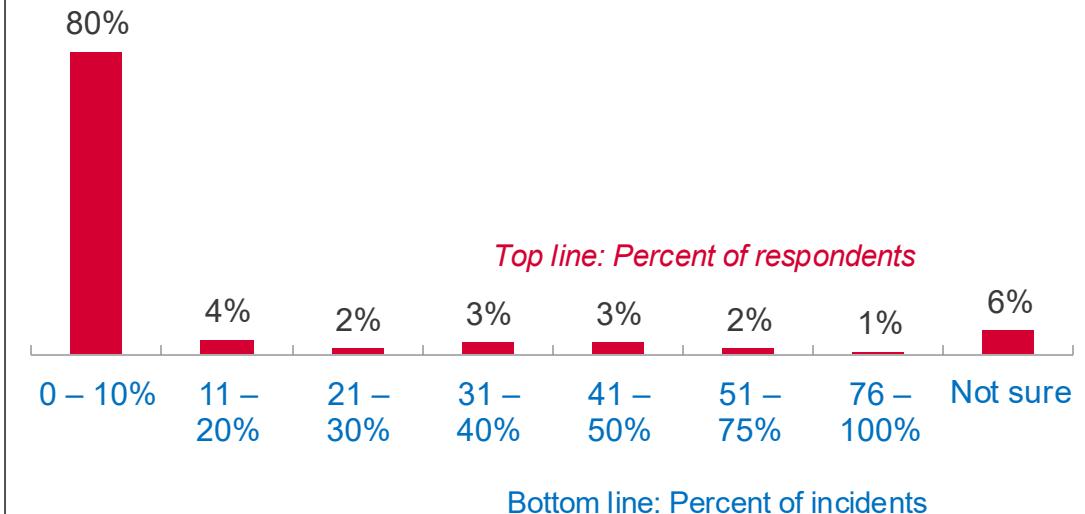
*Analysis by square feet of gaming space*

Amount	Less than 50,000	50,000 – 100,000	More than 100,000
Less than \$1,000	53%	61%	37%
\$1,000 – \$5,000	19%	20%	27%
\$5,001 – \$10,000	3%	2%	6%
\$10,001 – \$50,000	3%	14%	8%
More than \$50,000	0%	0%	3%
Not sure	22%	2%	19%

### Results of detection



### Percent of incidents in which employees colluded with cheaters



# SECTION FIVE

# ADVANTAGE PLAY

## DEFINITION OF ADVANTAGE PLAY IN THIS SURVEY:

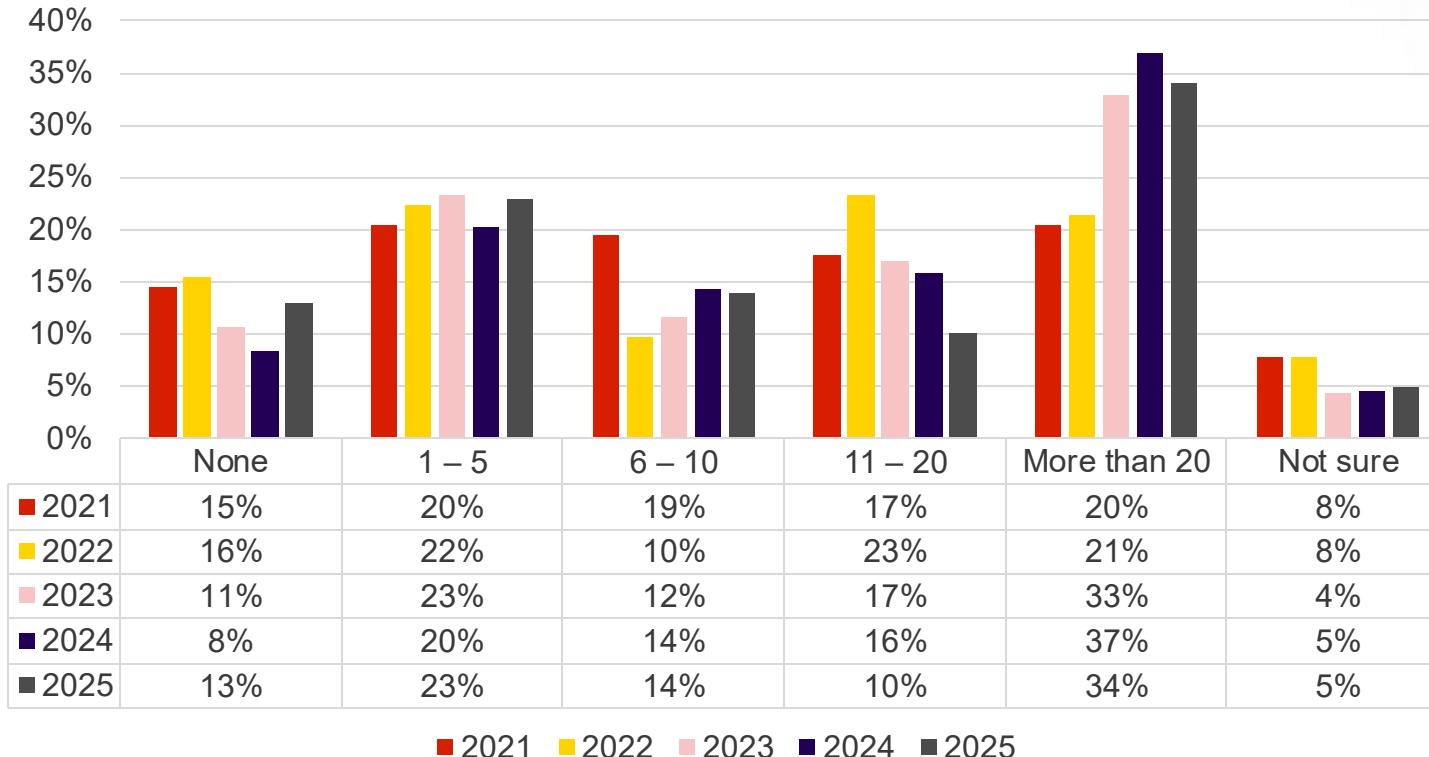
“By advantage play, we mean an individual, or group of individuals, acting to gain an advantage over the games in a casino without actively breaking policy and procedure. Examples include card counting without a computer, baccarat side game counting, placing roulette bets very late in the spin, and exploiting visible bonus features on slot machines when it becomes profitable to do so.”

**Derk J Boss, CFE, CPP, CSP  
President, IACSP**



## SECTION FIVE: ADVANTAGE PLAY

### 2021-2025 Number of advantage play incidents



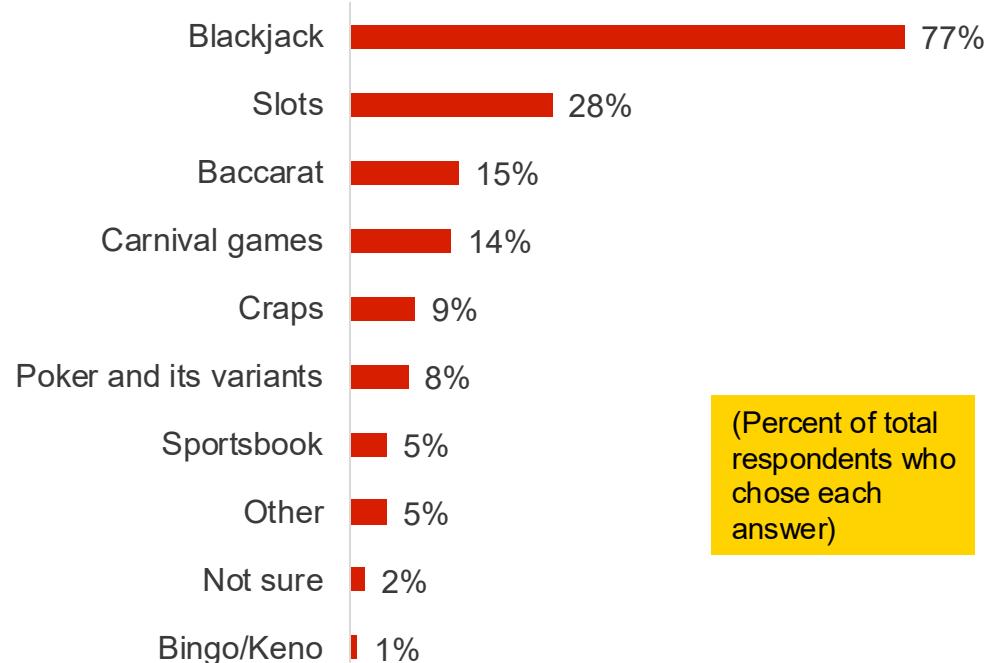
### Number of advantage play incidents in 2024

Analysis by square feet of gaming space

Incidents	Less than 50,000	50,000 – 100,000	More than 100,000
<b>None</b>	26%	13%	3%
<b>1 – 5</b>	42%	25%	10%
<b>6 – 10</b>	9%	15%	19%
<b>11 – 20</b>	5%	17%	8%
<b>More than 20</b>	9%	31%	52%
<b>Not sure</b>	9%	0%	8%

## SECTION FIVE: ADVANTAGE PLAY

### Areas where advantage play occurred

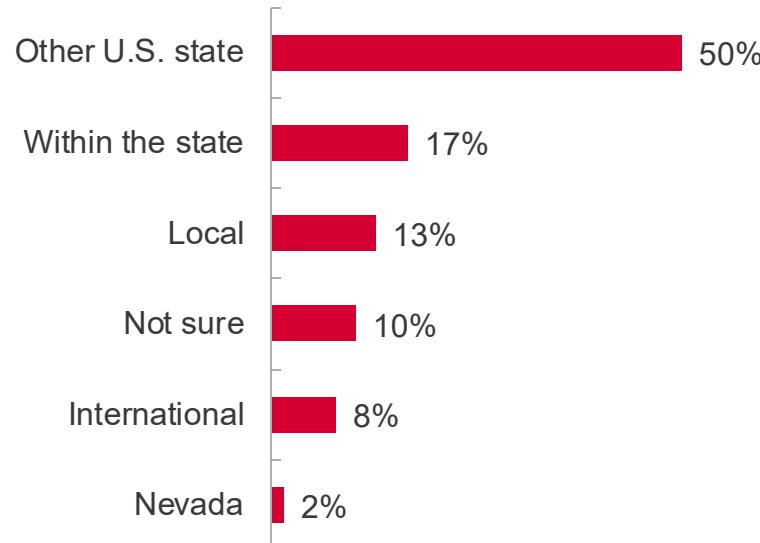


### How advantage play was detected

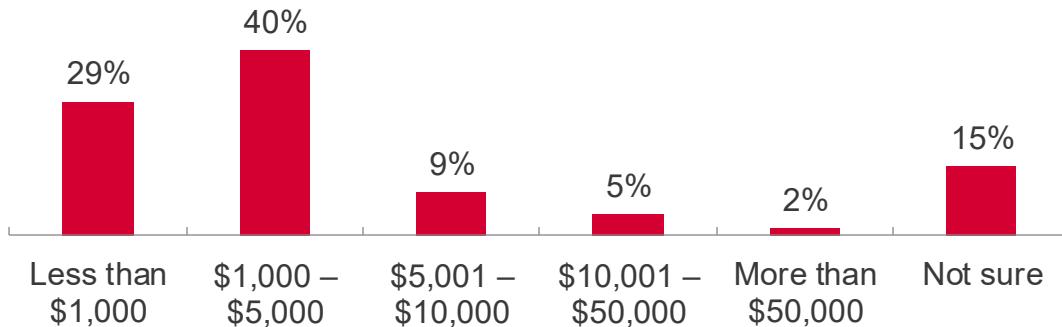


## SECTION FIVE: ADVANTAGE PLAY

### Where advantage players were primarily from



### Average amount of loss to advantage play incident in 2024



# INTERNAL THEFT/FRAUD

## SECTION SIX

### **DEFINITION OF INTERNAL THEFT/FRAUD IN THIS SURVEY:**

“By internal theft and fraud, we mean instances where staff members directly steal money from the casino operation, by whatever method.

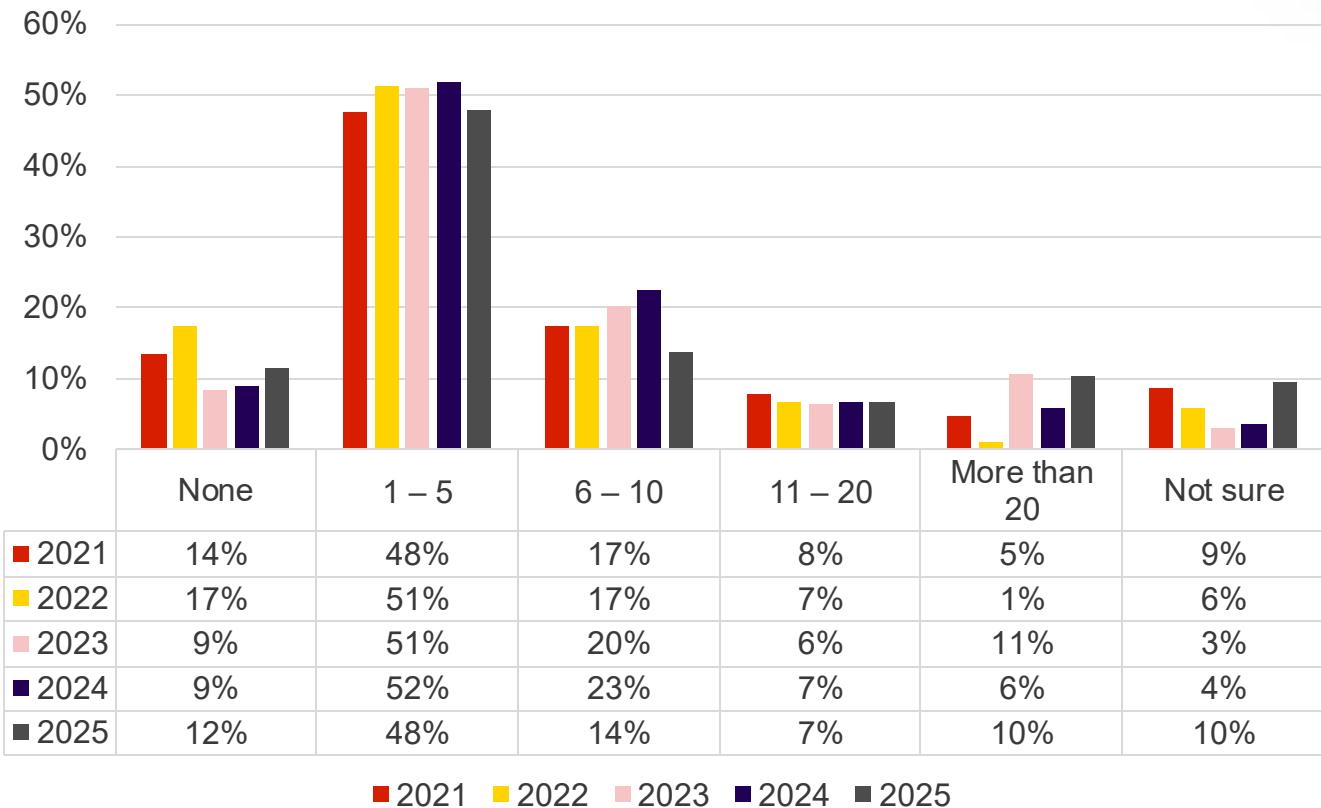
Examples: Slot employees producing and cashing out for their own benefit “test” TITO vouchers, staff exploiting marketing promotions to benefit friends and family, dealing staff stealing chips, hospitality staff stealing payments for food or beverages.”

**Derk J Boss, CFE, CPP, CSP  
President, IACSP**



## SECTION SIX: INTERNAL THEFT/FRAUD

### Cases of employee theft/fraud 2021-2025

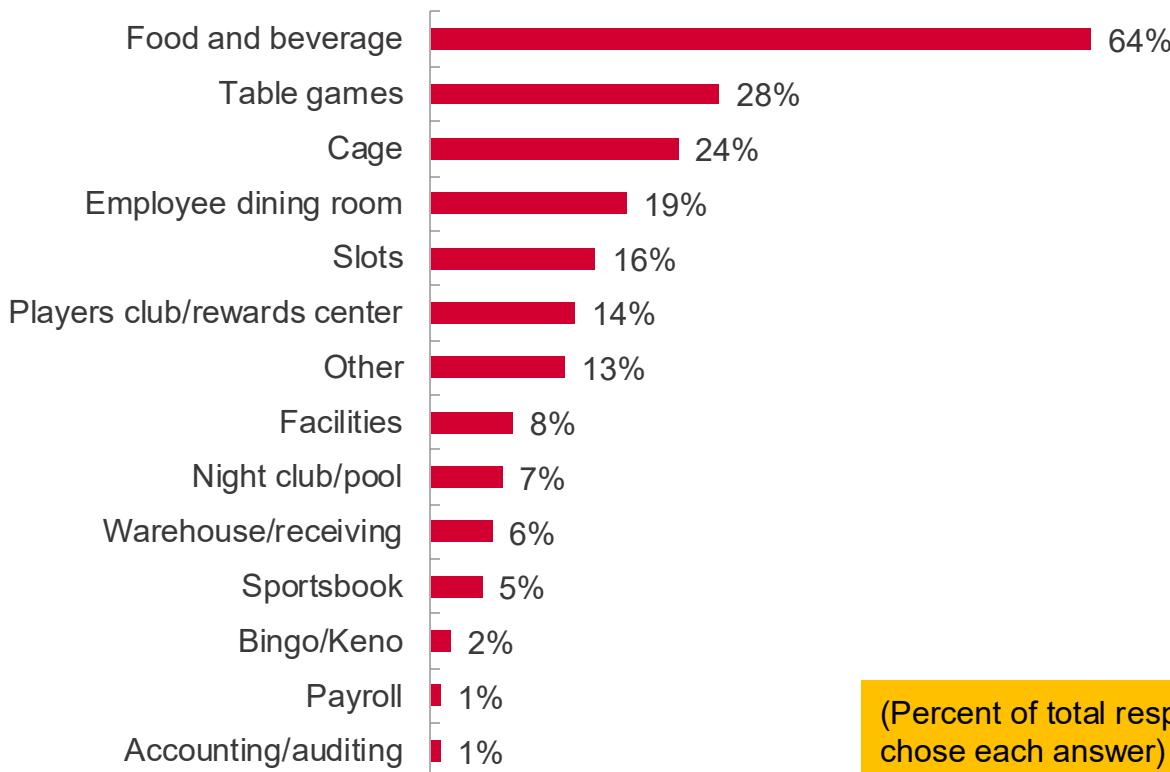


### Cases of internal theft/fraud in 2024

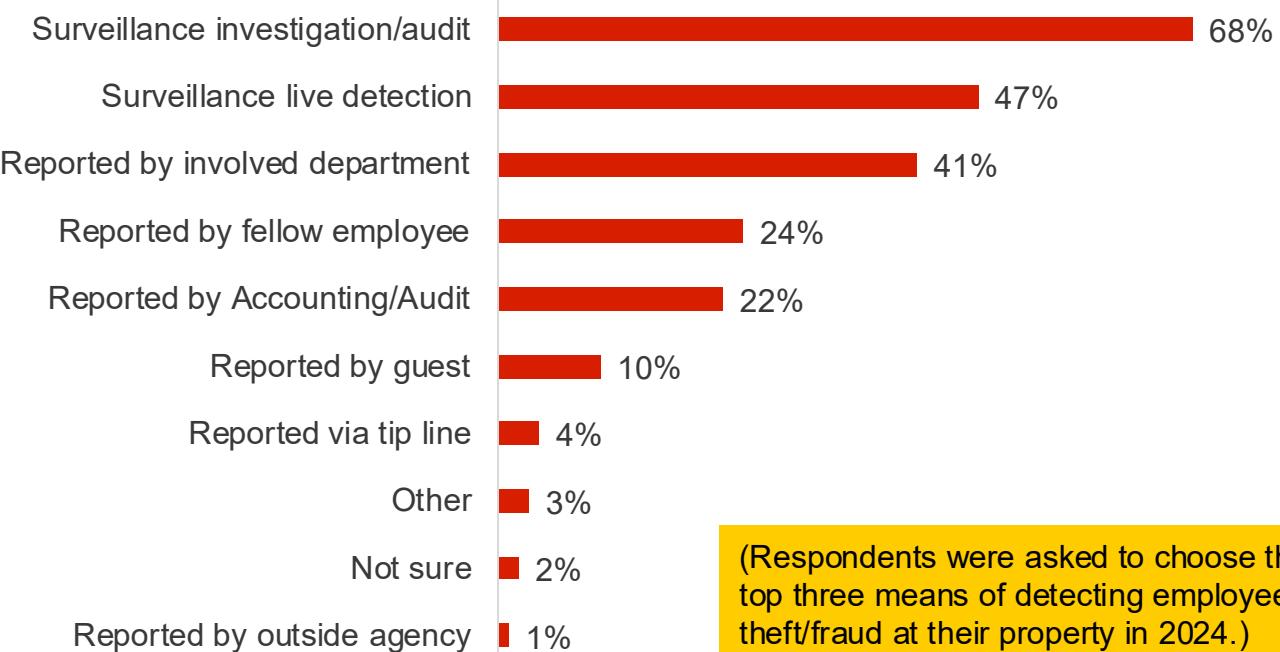
Analysis by square feet of gaming space

Cases	Less than 50,000	50,000 – 100,000	More than 100,000
None	32%	15%	2%
1 – 5	49%	48%	47%
6 – 10	5%	21%	13%
11 – 20	2%	8%	7%
More than 20	2%	2%	22%
Not sure	10%	6%	10%

### Areas/departments where employee theft/fraud occurred



### Primary means of employee theft/fraud detection



## SECTION SIX: INTERNAL THEFT/FRAUD



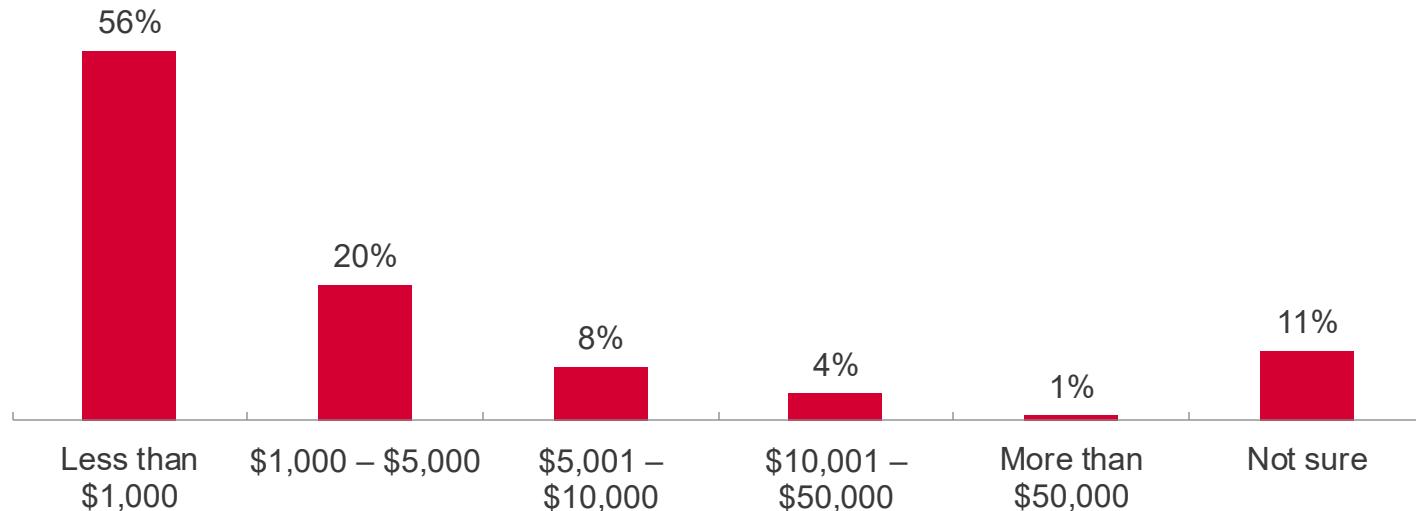
### RESPONDENT COMMENTS

*“Integration with analytics tools remains an ongoing improvement area.”*

\*\* Respondent comments are not edited

## SECTION SIX: INTERNAL THEFT/FRAUD

### Average amount of loss per incident to employee theft/fraud



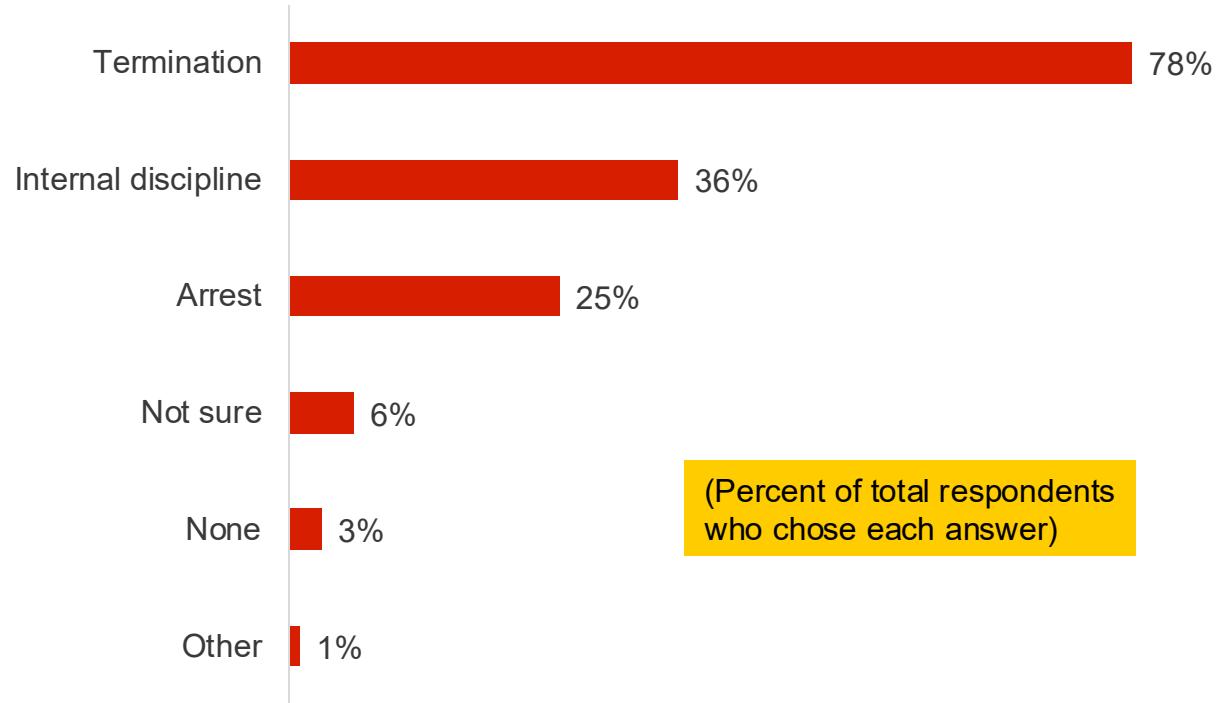
### Average amount of loss per incident to employee theft/fraud In 2024

#### Analysis by square feet of gaming space

Loss Amount	Less than 50,000	50,000 – 100,000	More than 100,000
Less than \$1,000	60%	56%	53%
\$1,000 – \$5,000	12%	23%	23%
\$5,001 – \$10,000	8%	5%	7%
\$10,001 – \$50,000	0%	8%	4%
More than \$50,000	0%	5%	0%
Not sure	20%	3%	14%

## SECTION SIX: INTERNAL THEFT/FRAUD

### Result of detected employee theft/fraud



### RESPONDENT COMMENTS

*“It gives room to see people in their true nature.”*

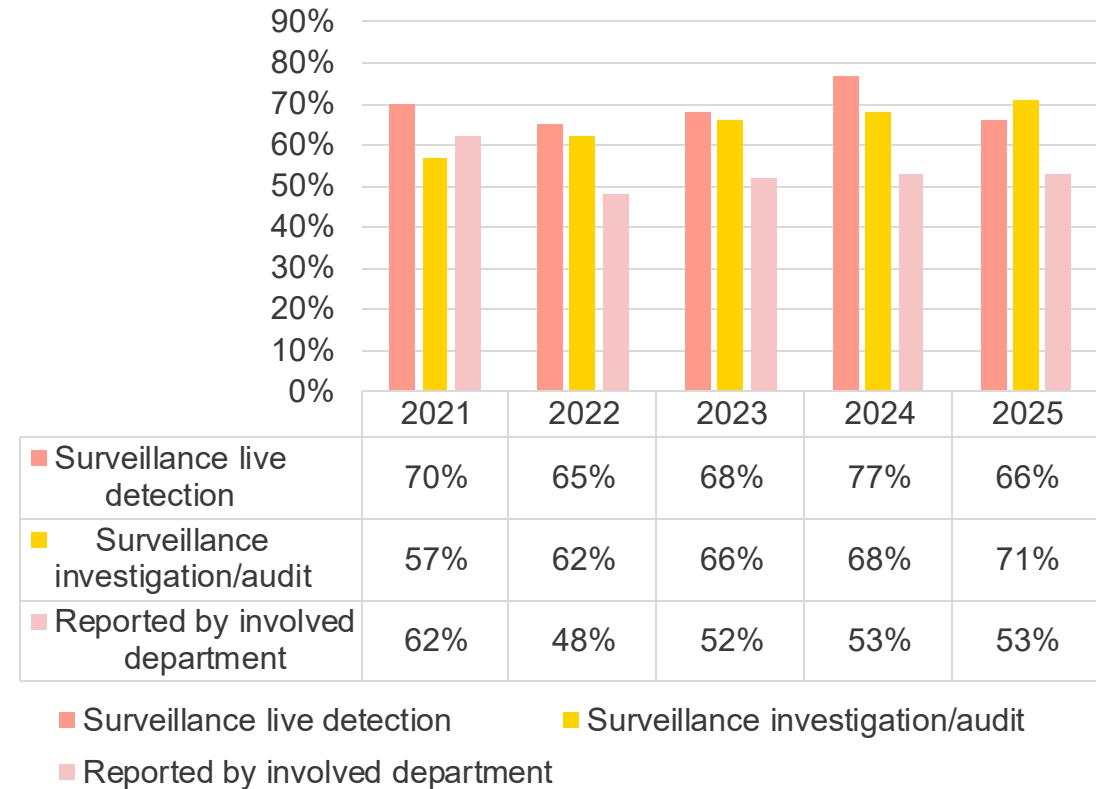
\*\* Respondent comments are not edited

## SECTION SIX: DETECTION COMPARISONS

This chart and the two charts on the next page show how the top three methods of detections for Cheating Incidents, Advantage Play Incidents, and Employee Theft/Fraud Incidents have shifted from 2021.

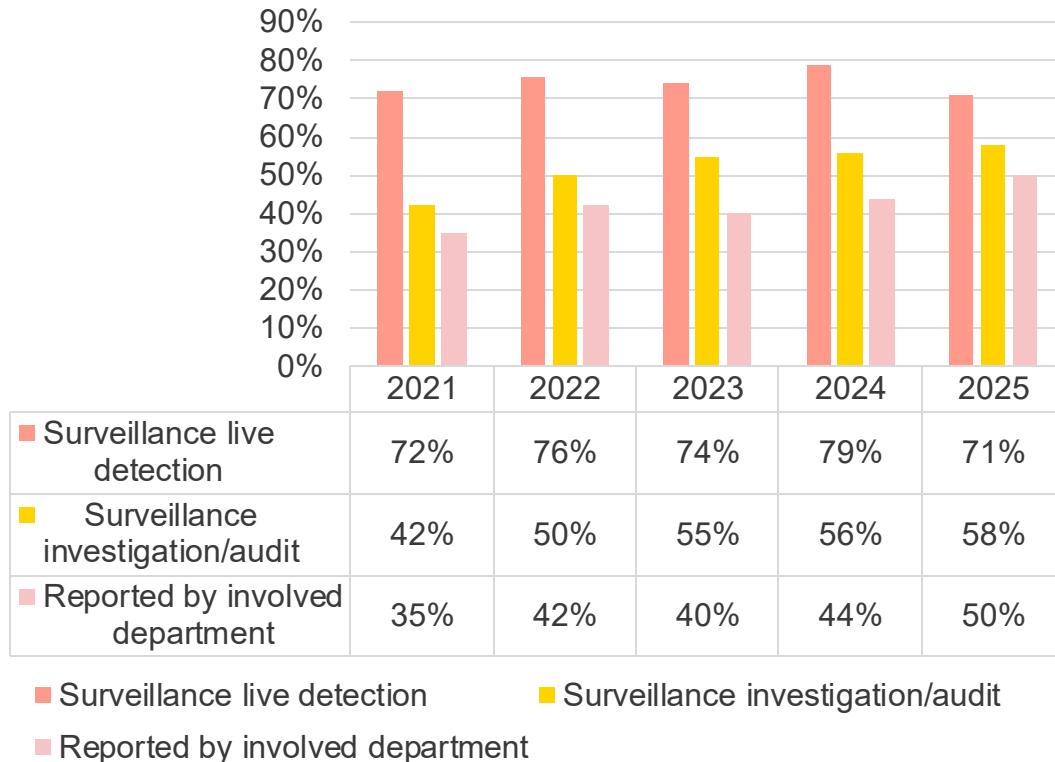
Most notably, cheating detections from Surveillance Investigation/Audit increased each year from 57% to 71%, taking the top spot in 2025 over Live Detection.

### Cheating detections – top three

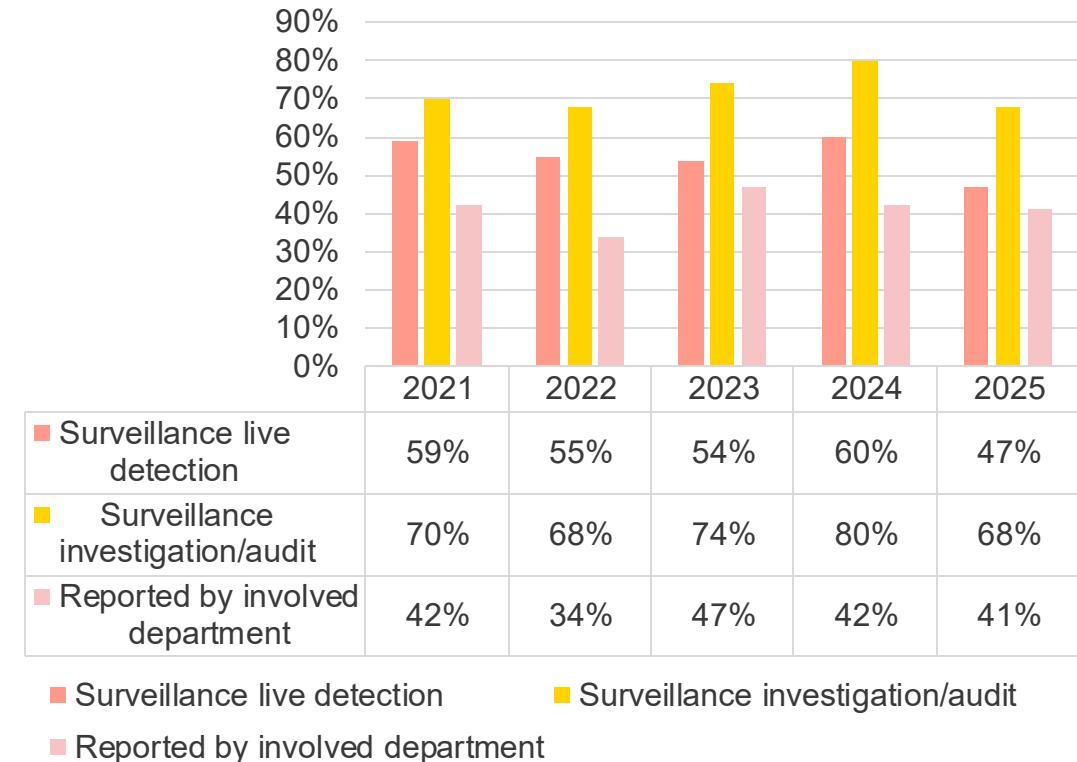


## SECTION SIX: DETECTION COMPARISONS

### Advantage play detections – top three



### Employee theft/fraud detections – top three



## SECTION SEVEN

# OPERATIONS TRENDS

### EXPERT OPINION:

“Table games remain the primary surveillance focus due to high volatility and revenue sensitivity, but other risk domains – guest-related incidents, AML compliance, internal theft/fraud, and human trafficking – are gaining prominence. The emergence of electronic table games will require additional slot surveillance capacity. While live patrol and video review still dominate operational time, the slow but measurable increase in information analysis adoption reflects a shift toward proactive detection. Forward-thinking surveillance teams are leveraging data analytics for early threat identification and operational optimization.

“Persistent State Machines’ as well as Electronic Table Games are specially mentioned as an emerging operational trend that is deserving of specific surveillance focus.”

**Derk J Boss, CFE, CPP, CSP**  
**President, IACSP**



## SECTION SEVEN

# OPERATIONS TRENDS

### **DEFINITION OF PERSISTENT STATE MACHINES IN THIS SURVEY:**

Definition of Persistent State Slot Machines are gaming machines where certain game features, progress, or “states” carry over between plays or sessions. Unlike traditional slots that reset entirely after each spin, persistent slots may store:

- Accumulated bonus progress (e.g., partially filled bonus meters).
- Unlocked special features or multipliers.
- Progress toward “must-hit-by” jackpots.

### **DEFINITION OF ELECTRONIC TABLE GAMES (ETGs) IN THIS SURVEY:**

Electronic Table Games are digital or hybrid versions of traditional table games like blackjack, roulette, baccarat, or craps. They can:

- Use a virtual display with RNG-based outcomes (fully electronic).
- Combine a physical dealer or mechanical components with electronic betting stations (hybrid ETGs).
- They aim to replicate the table game experience while allowing multiple players to participate simultaneously and often at lower bet minimums.

# SECTION SEVEN

# OPERATIONS TRENDS

## VULNERABILITIES TO SLOT ADVANTAGE PLAYERS AND CHEATS

### Persistent Slot Machines

1. Advantage Play Vulnerability
  - Advantage players can “machine scout” for games left in a favorable state (e.g., nearly full bonus meter) and only play when the expected value is positive.
  - This can result in casinos losing theoretical hold over time.
2. Predictable Progression Exploits
  - If the game’s bonus trigger is deterministic or predictable after a set number of spins, experienced players can time entry and avoid low-value states.
3. Cheating Risks
  - Tampering with software or hardware to falsely display a high-progress state.
  - Collusion with insiders to identify machines in profitable conditions.

### Electronic Table Games

1. Software Vulnerabilities
  - RNG exploitation if algorithms are predictable or improperly seeded.
  - Display manipulation to alter results or payouts.
2. Betting Pattern Exploits
  - If system timing allows delayed wagers after outcome determination due to latency issues.
3. Physical Manipulation (Hybrid ETGs)
  - If mechanical elements like roulette wheels are predictable or manipulated, advantage players can exploit bias detection.

## SECTION SEVEN

# BEST PRACTICES



**Recommended best practices** to improve overall operations:

1. Conduct a comprehensive risk assessment using a probability-impact model to identify and prioritize critical operational threats.
2. Design and maintain a property-wide surveillance audit schedule, ensuring complete coverage across all gaming and non-gaming operations.
3. Incorporate data analysis roles into the department structure to detect emerging fraud patterns and compliance gaps before they escalate.
4. Use a mix of live observation, retrospective review, and analytical reporting for balanced coverage.

## SECTION SEVEN

# BEST PRACTICES



**Recommended best practices** for persistent slot machines:

1. Monitor and identify consistent winners.
2. Monitor players on device time, longer time on device may indicate a persistent state machine and advantage player.
3. Monitor players for tells of slot advantage play.
4. Surveillance Prevention: Track and analyze player patterns for “cherry-picking” behaviors.
5. Data Monitoring: Use analytics to flag abnormal win rates or unusual betting patterns.

## SECTION SEVEN

# BEST PRACTICES



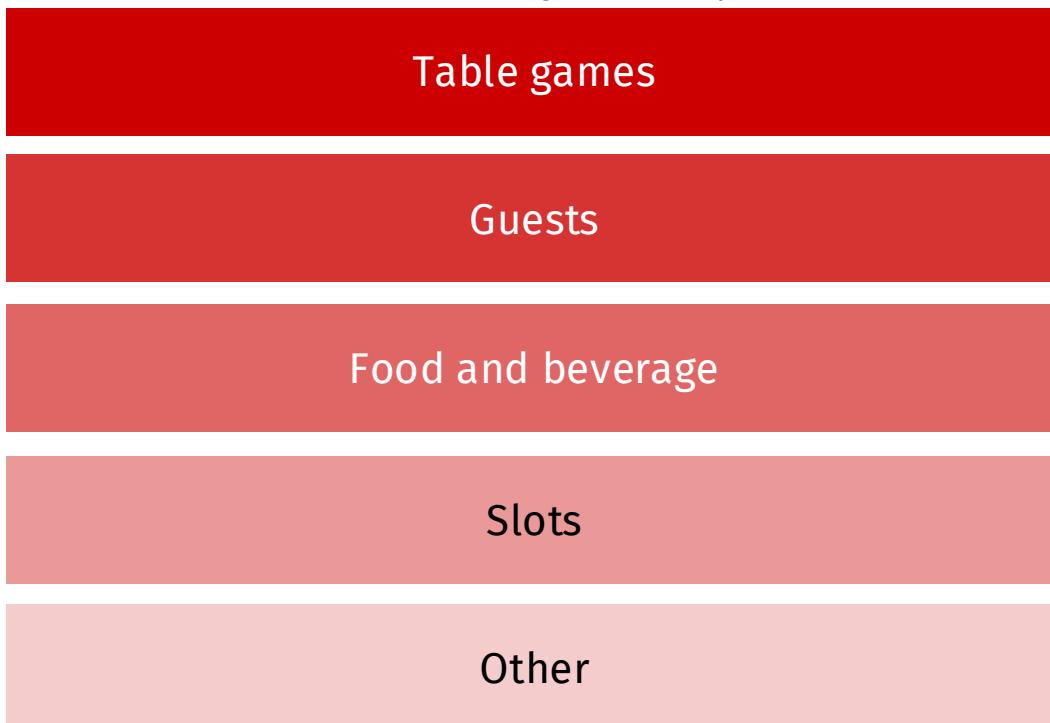
**Recommended best practices** for electronic table games (ETGs):

1. Monitor and identify consistent winners.
2. Observe players for tells of slot advantage play.
3. Secure RNG Implementation: Use certified, regularly audited RNGs with cryptographically secure seeding.
4. Check latency Management: Close betting strictly before outcome determination.
5. Hardware Integrity Checks: Regularly inspect and calibrate physical components to prevent bias exploitation.
6. Data Monitoring: Use analytics to flag abnormal win rates or unusual betting patterns

## SECTION SEVEN: OPERATIONS TRENDS

**Respondents ranked the list below in order of importance regarding the use of security and surveillance resources.**

*The list is in descending order of importance:*



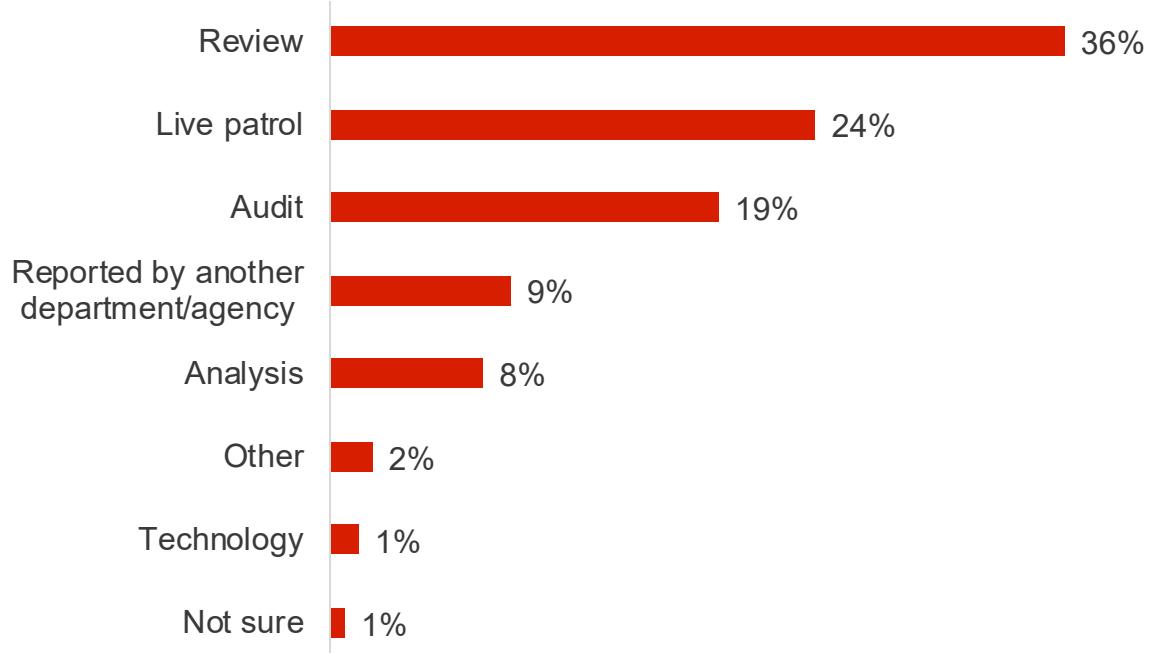
**Survey respondents ranked the list below in order of which type of operation creates the most impactful decision.**

*The list is in descending order of importance:*

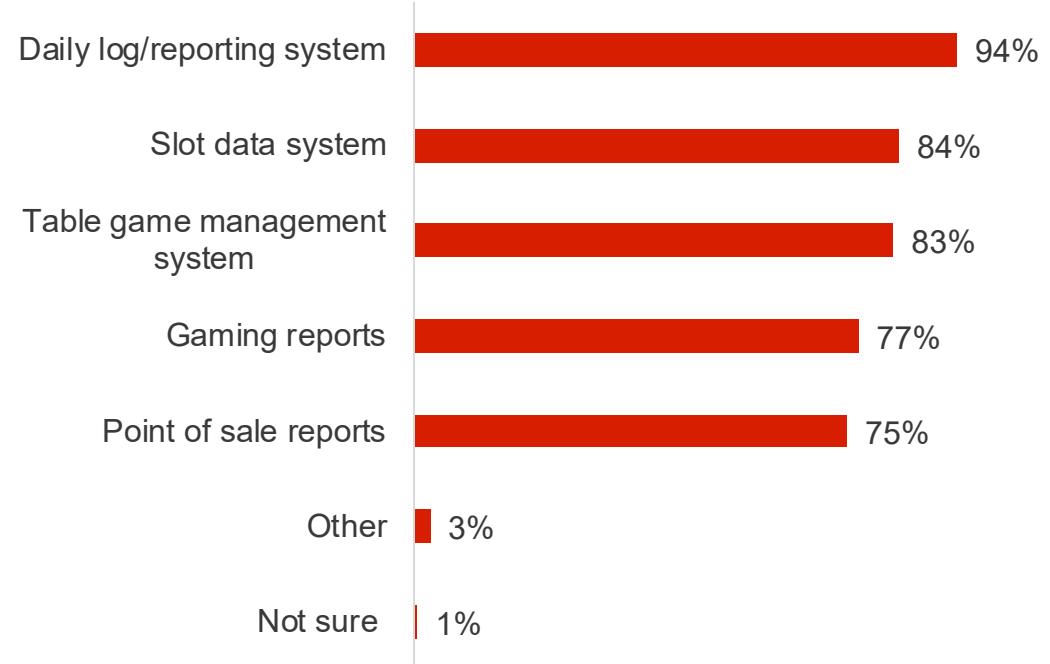


## SECTION SEVEN: OPERATIONS TRENDS

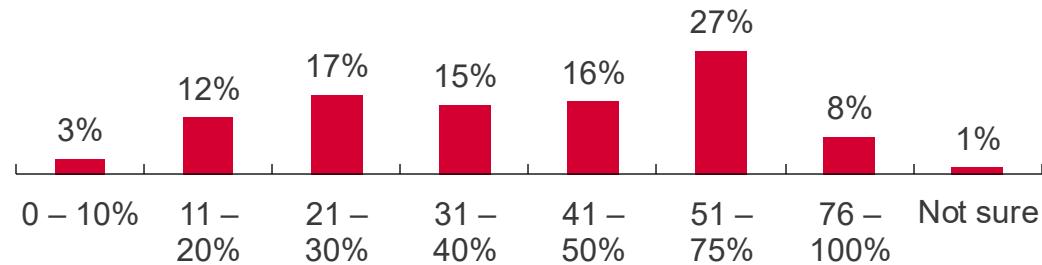
### Top way that most surveillance detections are made



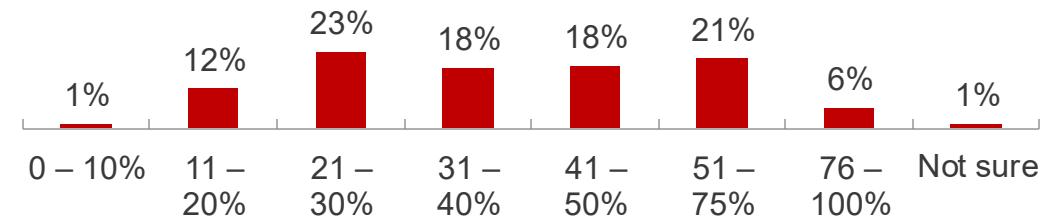
### Reporting/information tools available to surveillance



### Percent of time spent by agents on live observation/patrol

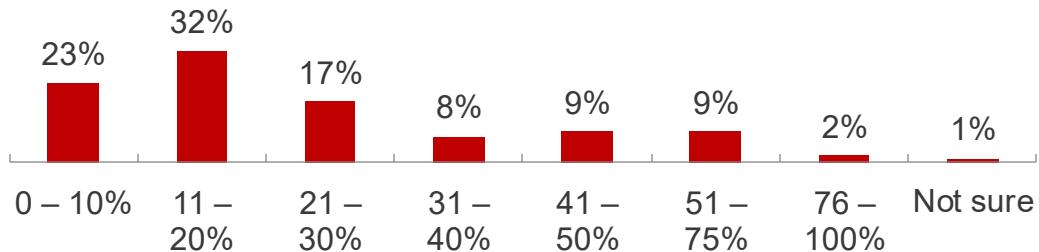


### Percent of time spent by agents on reviews

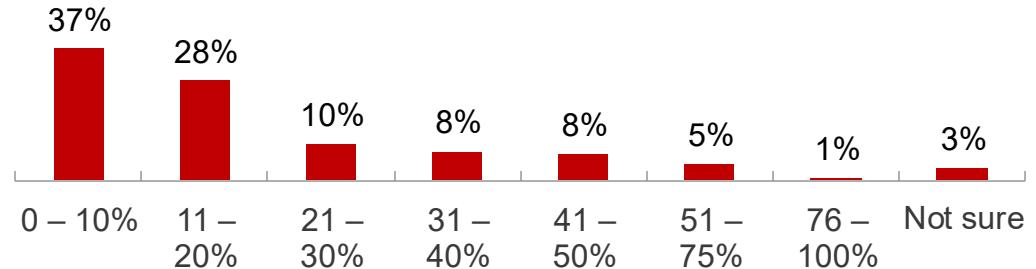


*(Top row of numbers is the percent of respondents who chose that answer. Bottom row of numbers is the percent range of time spent.)*

**Percent of time spent by agents  
on video audits**



**Percent of time spent on information  
analysis**



*(Top row of numbers is the percent of respondents who chose that answer. Bottom row of numbers is the percent range of time spent.)*

# SECTION EIGHT

# TECHNOLOGY

## EXPERT OPINION:

“Facial recognition technology (FR) adoption has doubled since 2021, with half of operators reporting a significant positive operational impact. Despite a slight drop in planned FR adoption rates compared to 2024, usage remains on an upward trajectory. ID scanning technologies remain common, with Veridocs and Veriscan leading in implementation. As properties deploy advanced surveillance tools, they must also scale their capacity to manage, analyze, and act on the resulting data streams.”

**Derk J Boss, CFE, CPP, CSP  
President, IACSP**



## SECTION EIGHT

# BEST PRACTICES

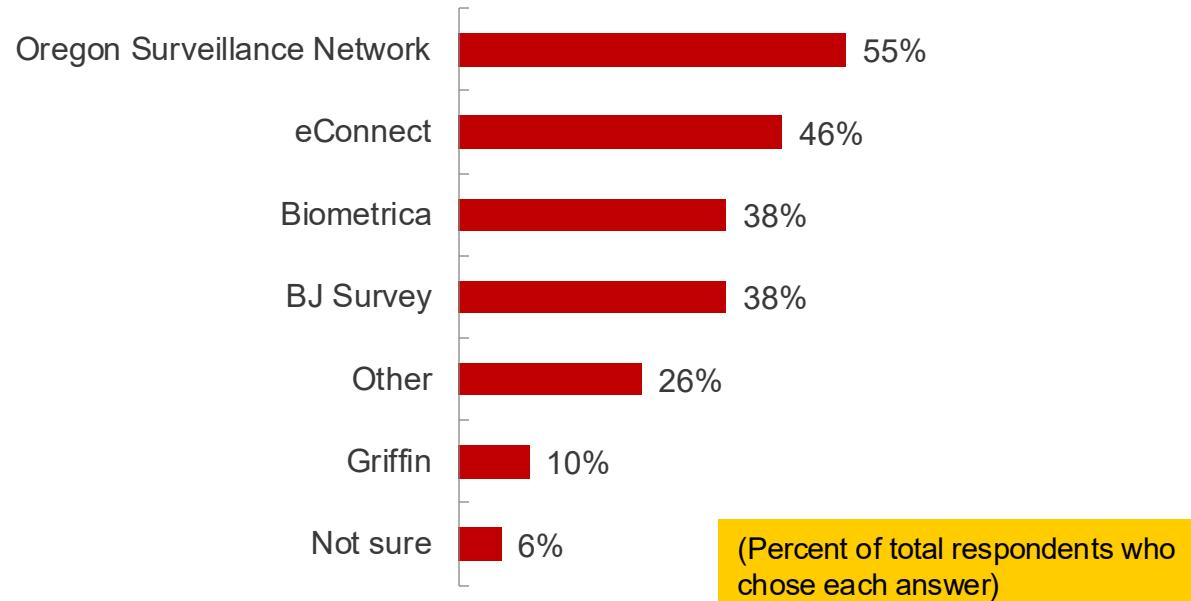


**Recommended Best Practices** to approach technology:

1. Deploy FR and license plate recognition (LPR) as part of a structured threat identification program, ensuring that reference databases are accurate, up-to-date, and legally compliant.
2. Build operational playbooks for each technology – detailing alert response procedures, evidence collection standards, and integration with security and law enforcement protocols.
3. Maintain ongoing technical and operational training for staff to optimize technology use and ensure compliance with privacy laws.

## SECTION EIGHT: TECHNOLOGY

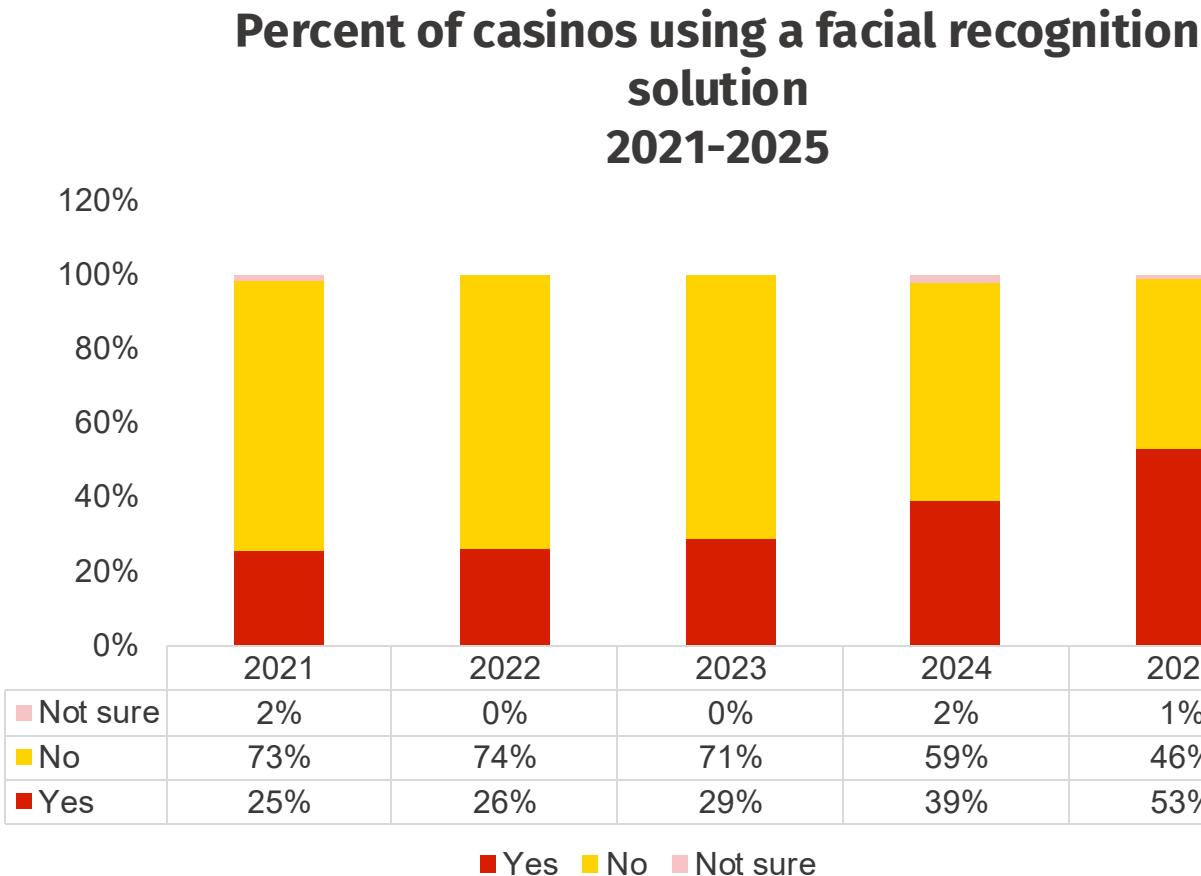
### Systems or databases used by surveillance



### RESPONDENT COMMENTS

*"Facial recognition is illegal in Illinois. With the advancements I've seen and read about with recognition and AI software, there should be some kind of regulation change."*

\*\* Respondent comments are not edited



## SECTION EIGHT: TECHNOLOGY

### Percent of casinos using facial recognition technology

#### Analysis by square feet of gaming space

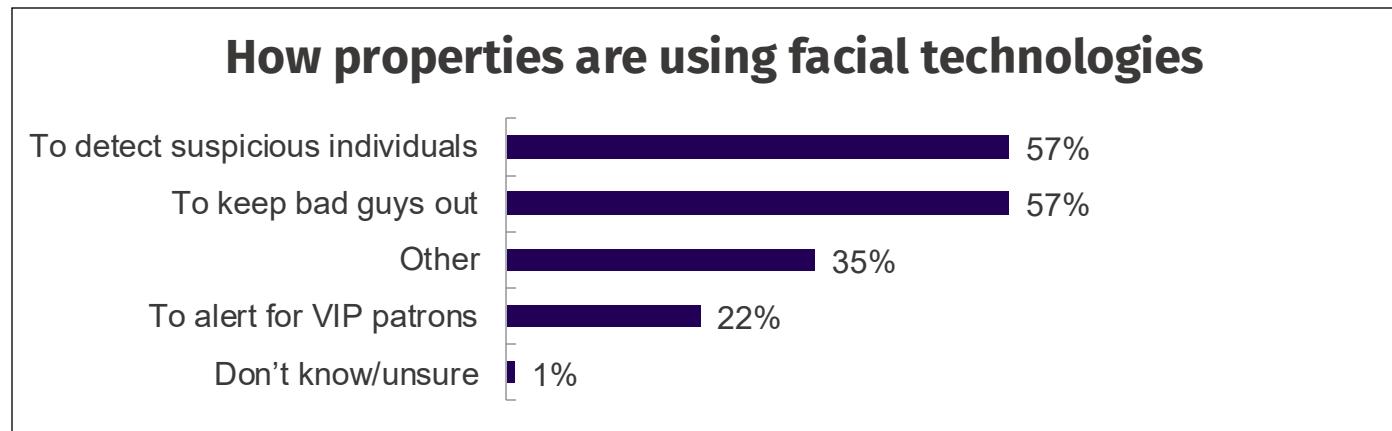
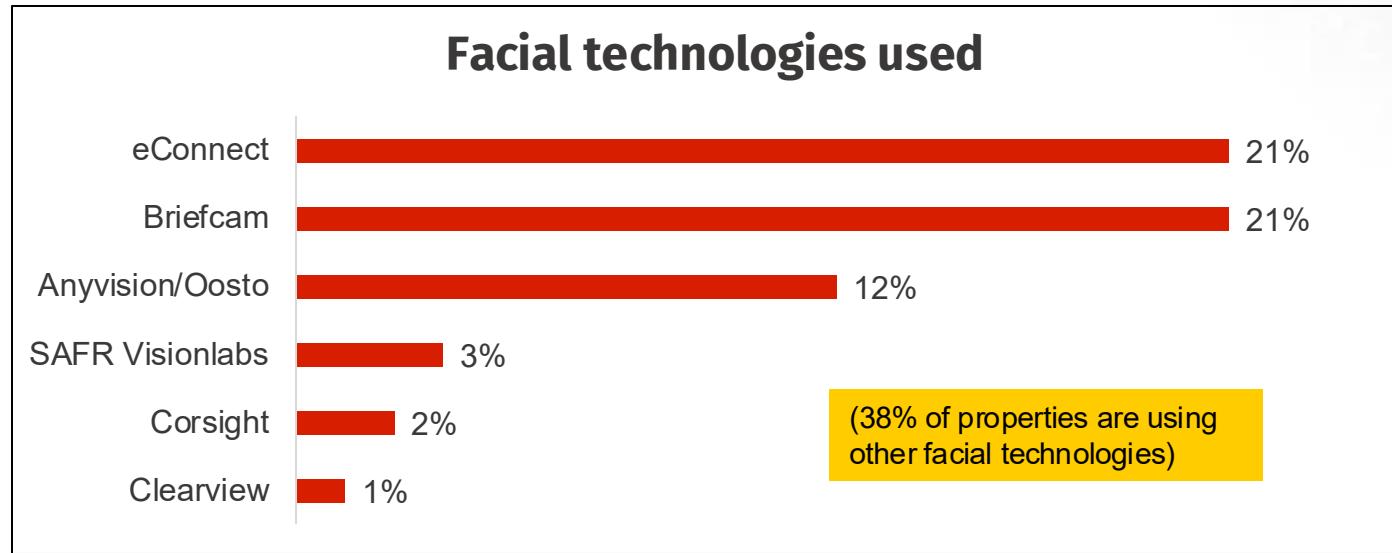
Usage	Less than 50,000	50,000 – 100,000	More than 100,000
Yes	59%	42%	57%
No	38%	58%	41%
Not sure	3%	0%	2%

### Percent of casinos using facial recognition technology

#### Analysis by type of casino

Usage	Commercial	Tribal
Yes	44%	52%
No	56%	46%
Not sure	0%	2%

Tribal casinos continue to lead over commercial casinos in use of facial recognition technology.



## SECTION EIGHT: TECHNOLOGY



### **Impact facial recognition technology has on detecting crime/undesirable activity**

Fairly large impact

**28%**

Neutral

**26%**

Huge impact

**22%**

Not sure

**12%**

Small increase

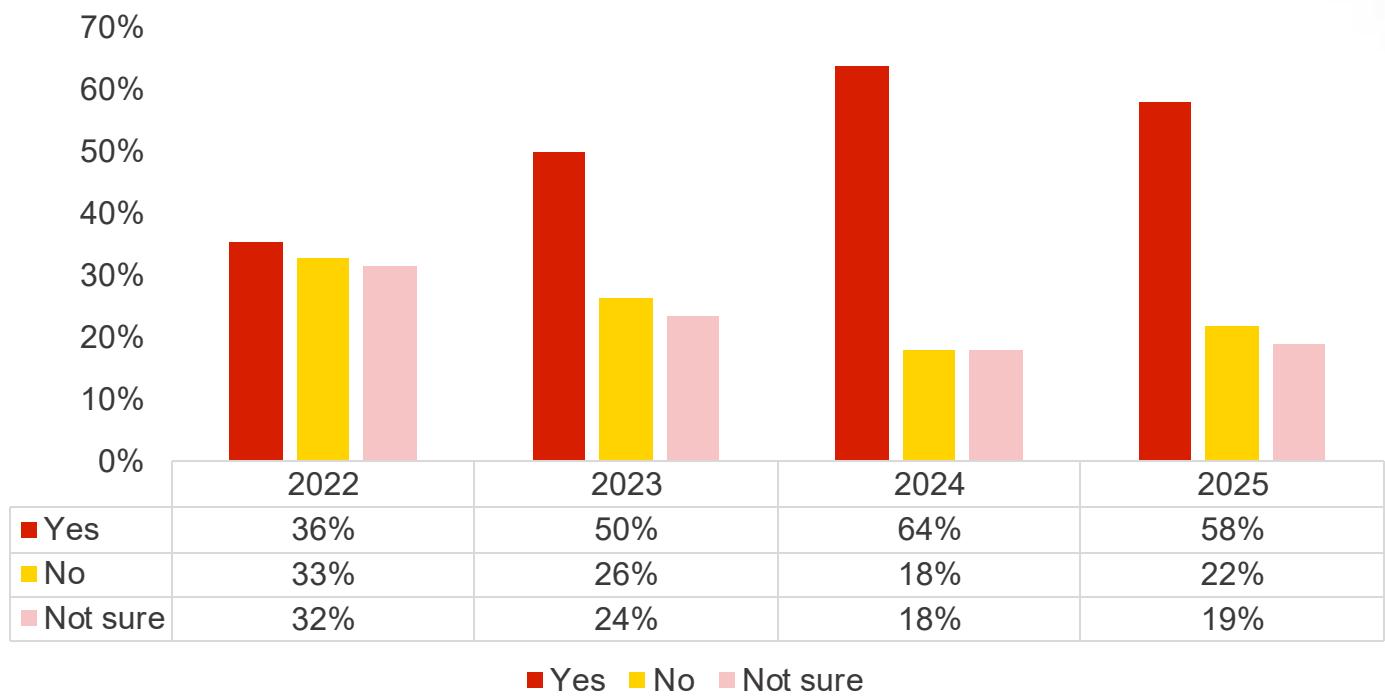
**9%**

No increase at all

**3%**

**This question was answered by 90 responding properties that currently use facial recognition technology.**

**Plans to invest in facial technology by casinos that do not currently have it**



*(Future investment plans were not included in the 2021 survey.)*

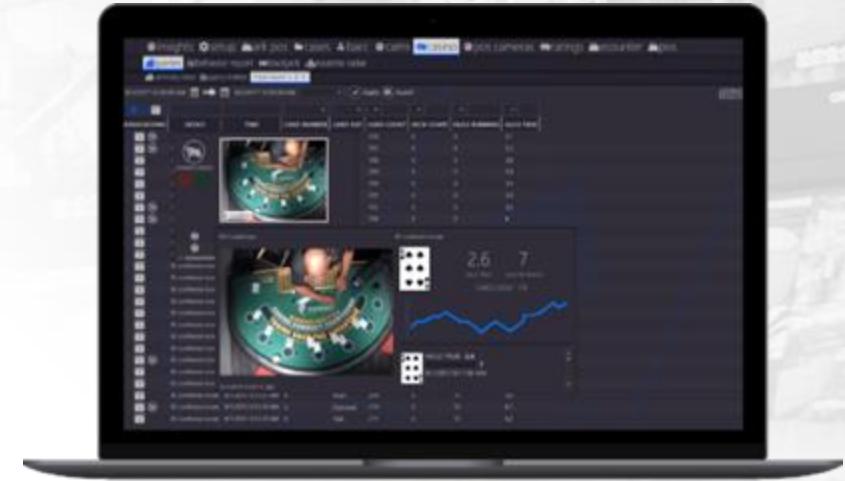
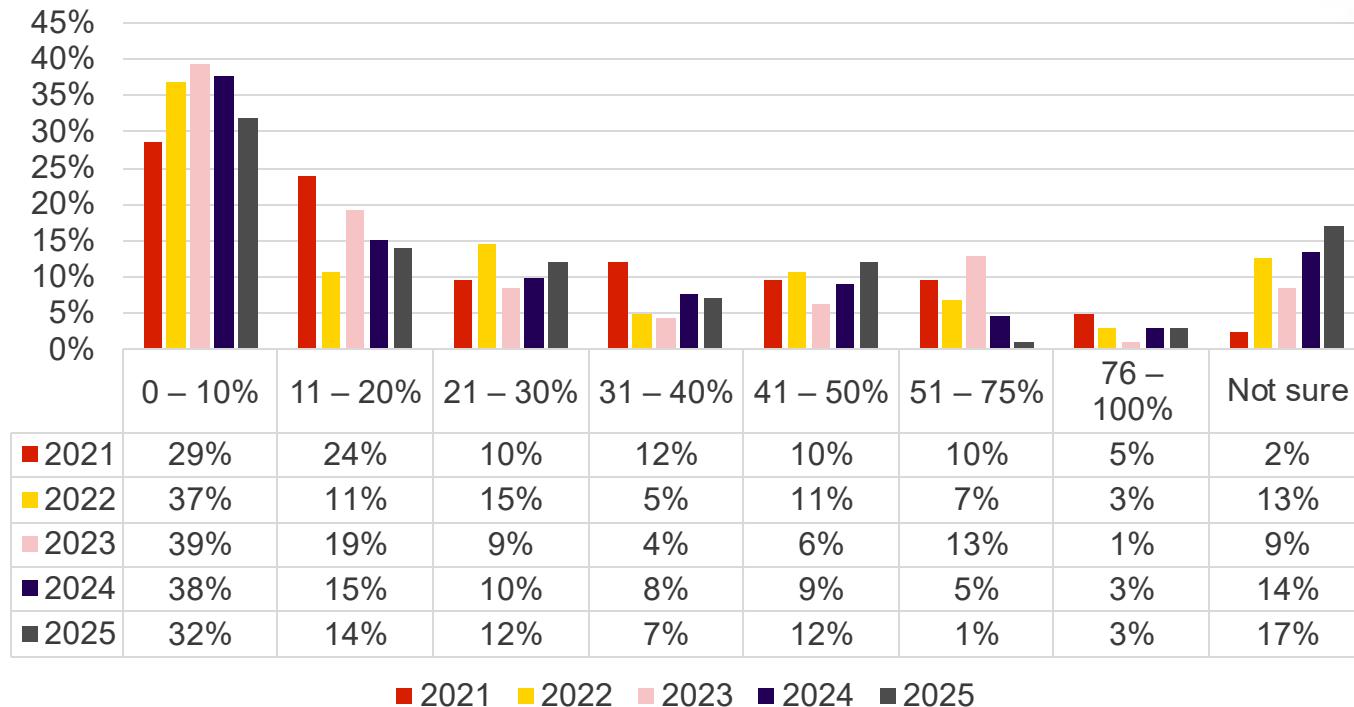
**SECTION EIGHT:  
TECHNOLOGY**



**Future investment plans: Commercial and Tribal**

Plans	Commercial	Tribal	Other
Yes	56%	58%	75%
No	28%	13%	25%
Not sure	15%	29%	0%

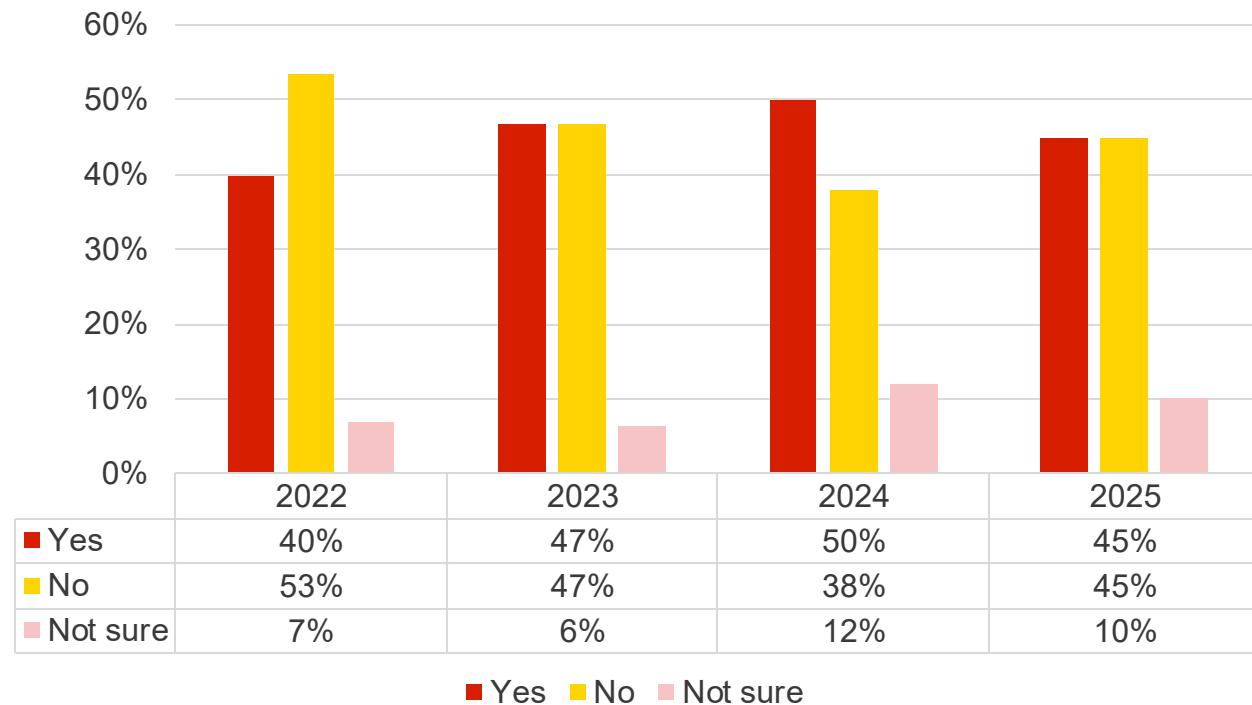
**Percent of investigations aided by eConnect  
or other advanced technology**



*\*eConnect is one of the sponsors of this survey. Their sponsorship in no way influenced the data collection, analysis, or reporting of information; nor will it be used in any sales capacity.*

## SECTION EIGHT: TECHNOLOGY

### Percent of properties with ID scan solution



(ID scan question was not included in the 2021 survey.)

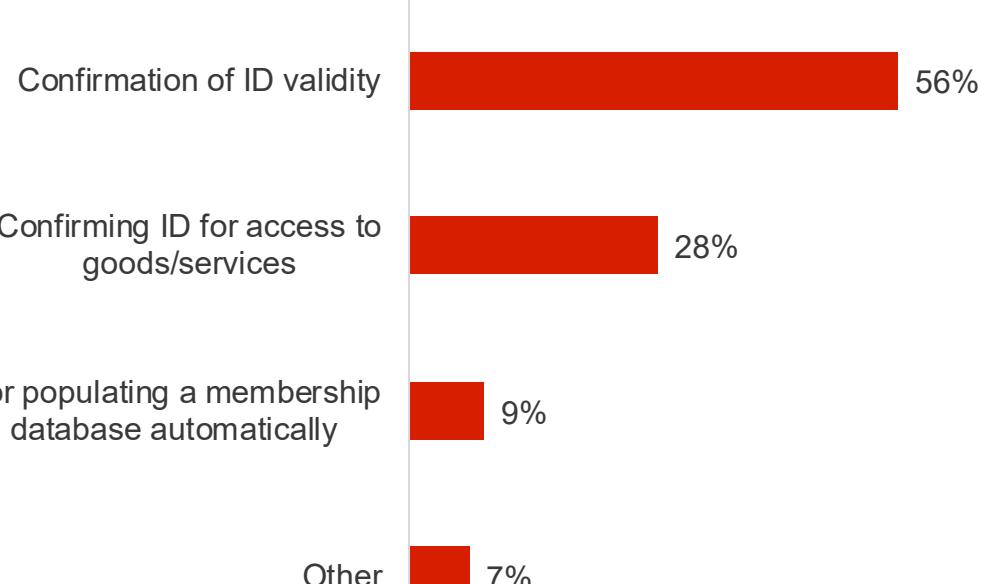
### Percent of properties with ID scan solution in 2025

*Analysis by type of casino*

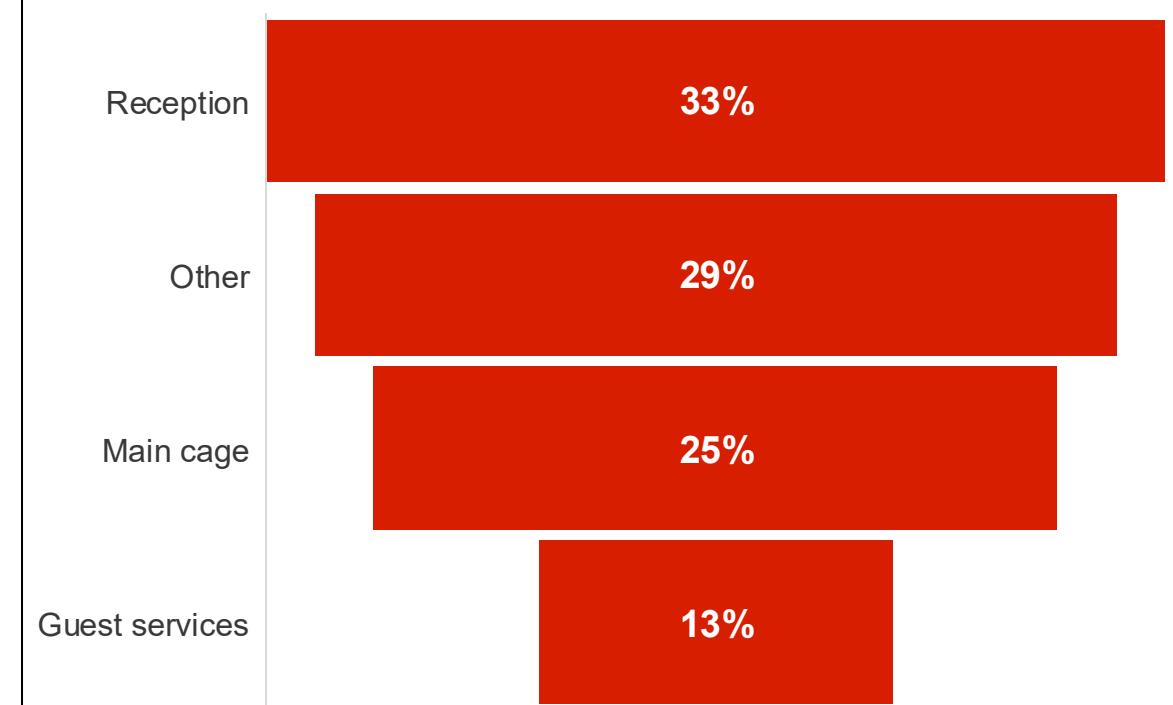
Usage	Commercial	Tribal
Yes	54%	46%
No	36%	40%
Not sure	10%	13%

**Veridocs and Veriscan are the top two systems being used in 2025.**

### How ID scan solution is used



### Areas where ID scan is used



# SECTION NINE

# TOP THREATS

## EXPERT OPINION:

“Internal theft/fraud remains the most significant risk, accounting for high-value losses and operational disruptions. Cheating remains the second-ranked concern, but cyber threats – while slightly down in 2025 – continue to rival cheating losses in magnitude, especially through ransomware and phishing. The evolving threat environment demands that surveillance departments expand their scope beyond physical monitoring to include cyber-physical threat integration and post-incident recovery strategies.”

**Derk J Boss, CFE, CPP, CSP**  
**President, IACSP**

## SECTION NINE BEST PRACTICES

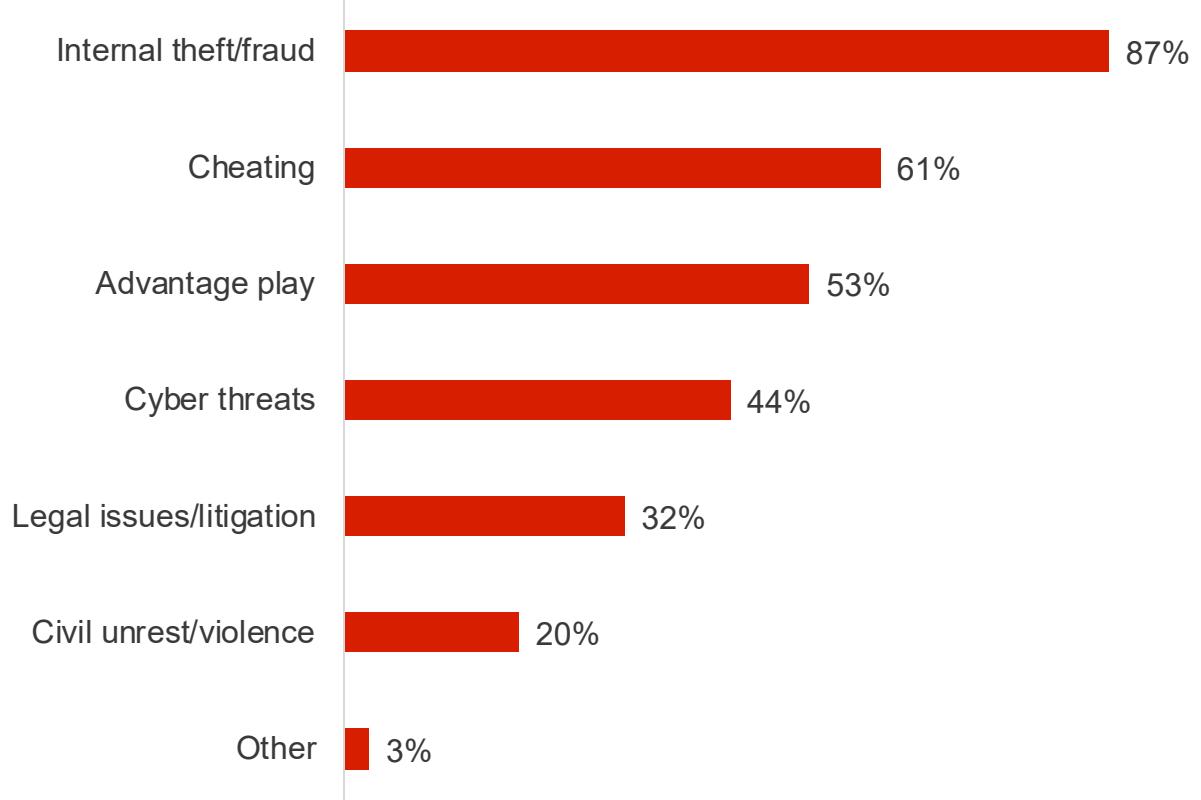


**Recommended best practices** to approach top threats:

1. Implement a full-spectrum audit and observation plan, covering all property areas with a focus on cash handling, high-value transactions, and restricted zones.
2. Incorporate cybersecurity awareness into surveillance training, including phishing recognition, ransomware incident response, and coordination with IT security teams.
3. Develop and regularly rehearse a cross-departmental contingency plan for system outages – prioritizing asset protection, manual tracking methods, and cash-equivalent lockdown procedures.

## SECTION NINE: TOP THREATS

### Top threats in 2025



### RESPONDENT COMMENTS

*“The survey is critical to understand the ever-evolving landscape of gaming surveillance.”*

\*\* Respondent comments are not edited

The last survey question asked for any final thoughts about surveillance. The following is a selection of unedited quotes from survey respondents:

*Integration with analytics tools remains an ongoing improvement area.*

*Surveillance is not solely focused on detecting wrongdoing — it also serves as a powerful strategic intelligence tool that contributes to broader organizational goals. It helps improve operational efficiency by identifying process gaps, monitoring compliance, and supporting smoother day-to-day operations. It provides objective evidence to support legal and human resources teams in resolving disputes, conducting investigations, and ensuring fair outcomes. By leveraging surveillance proactively, organizations enhance both security and performance across all departments.*

*The surveillance departments report to the casino operation. There is also a small team of surveillance professionals that report to the TGRA and do random and scheduled reviews of the operation to ensure regulatory compliance and to look for cheating or advantage play when time permits. Mostly, we use reports from the casino reporting applications to look for anomalies for leads to review.*

*Increased staffing would significantly improve fraud and theft prevention; with current levels, we're reactive rather than proactive. Despite this, current staffing levels meet all requirements.*

*We are spending the majority of our time investigating medical injuries onboard due to increased litigation risk, leaving us less time to monitor the casino and other areas, i.e., F&B, etc.*

*Looking at eConnect options for SIGA in the next year.*

*Staffing continues to be a problem.*

*Thank you for the survey and hope this data helps.*

*The survey is critical to understanding the ever-evolving landscape of Gaming Surveillance*

*We are unique in that we have a centralized surveillance for five properties.*

*Our surveillance team's main goals are primarily gaming and financial intelligence and well-being.*

*I wish more General Managers took an interest in what Surveillance actually does. They always seem to have more interest in the revenue generating departments than us.*

*AML and Compliance is a significant area of concentration and review*

*We are open for new technologies.*

*We need to keep communication open between all properties, Tribal, mainstream brick-and-mortar shops, etc., regarding advantage play, possible threats, etc. Communication is a win-win tool for all properties.*

*Facial recognition is illegal in Illinois. With the advancements I've seen and read about with recognition and AI softwares, there should be some kind of regulations change.*

*Surveillance balances security and privacy. Effective operation requires transparency, legal oversight, and public trust to prevent misuse while protecting societal safety.*

*Mass data collection can lead to profiling and erosion of anonymity.*

*Our state gaming board prohibits facial recognition and connecting to the internet which prevents a lot of great technology that could be used in surveillance.*

*It's a never ending learning experience.*

*It will be fascinating to see how the industry - particularly Surveillance - embraces AI and ML in the coming years, especially as camera systems and related technologies continue to evolve. I'm especially interested in how Surveillance can leverage these advancements to enhance operational effectiveness in detecting cheating, theft, and other suspicious activities.*

*A Surveillance department is only as effective as the operator's ability and training, so to have all the latest equipment is a plus, but there is no substitute for continuous training and skills development, as we never stop learning in this industry!*

*It has been very difficult to hire employees with the skills necessary to do the job. Every day we perform more audit reviews and human resources special requests. Every day we get more data to analyze and evaluate. Some surveillance agents do not understand the importance of keeping up to date with technology advances, the uses of computers, and using databases to analyze data. Other agents want to keep observing only gaming tables when we have more risk in areas like the players club, count rooms, and cage. Cyber threats are a reality, and I don't feel we have the tools necessary to prevent or investigate it. Convergence with audits, information technology, and AI is a reality now that will hit our faces if we don't keep up to date. I have found myself trying to use (and learning) from open source investigations in the hiring process and when corroborating players' info... This is a whole new world!*

*It gives room to see people in their true nature*

*More Freedom for surveillance investigators*

*We would like to hear how the smart tables are affecting other properties.*

*Too much focus on non-gaming that could be diverted to Security.*

*Surveillance continues to be my passion - it is an entertaining, interesting, frustrating, challenging, and fun environment - I couldn't imagine doing anything else!*

# CONCLUSION & KEY TAKEAWAYS



## CONCLUSION

The 2025 Fifth Annual International Casino Surveillance Survey reveals an industry in transition – balancing legacy observation methods with the integration of advanced technologies, data analytics, and cross-functional risk management. Improvements in access to top management and budgetary support for training are encouraging signs that surveillance is increasingly recognized as a strategic asset. However, gaps in technical staffing and inconsistent adoption of analytical methods highlight areas for improvement.

## KEY TAKEAWAYS

- **Access & Influence:** Strengthened executive engagement is translating into better alignment between surveillance and property-wide objectives.
- **Workforce Development:** Wage growth and expanded training budgets are positioning departments to attract and retain skilled staff.
- **Technology Integration:** FR, LPR, and ID scanning are delivering measurable benefits, but require ongoing operational planning and staff competency development.
- **Threat Adaptation:** Internal theft remains the leading concern, but the growing complexity of cyber and hybrid threats requires a broadened surveillance mandate.

## CONCLUSION

# FORWARD-LOOKING RECOMMENDATIONS



### **Recommended best practices** for the future:

- 1. Strategic Positioning:** Position surveillance as a hybrid operational-intelligence unit capable of supporting both security and business optimization functions.
- 2. Analytics Expansion:** Invest in data-driven tools and analytical roles to move from reactive investigation to proactive prevention.
- 3. Technical Workforce Planning:** Develop in-house technical expertise to reduce overreliance on third parties and ensure rapid on-site response to system issues.
- 4. Cyber-Physical Integration:** Incorporate cybersecurity threat monitoring into surveillance operations for a unified approach to property protection.
- 5. Continuous Training & Certification:** Formalize professional development pathways tied to recognized certifications and measurable operational impact.

# RELIABILITY OF THE DATA



This study was conducted by Debra Hilgeman, Ph.D., an experienced casino marketer and research expert who has been a part of Raving's team since 2006. She designed the survey and protocols for the survey to be administered online using professional survey software. Casinos operate in highly competitive environments, and some of the questions ask for proprietary information. Anonymity is guaranteed for all survey participants. No information or reports will contain any information that can be used to identify any individual or casino.

## **Reliability and Validity of Data:**

In large-scale consumer research, metrics such as 95% reliability and 5% margin of error are the standard. But in studies like this, based on substantial proportions of small overall populations, the larger concern is validity — whether elements of the population are appropriately represented. The participating casinos here show good distribution across size, geographic area, and services, and although the sample is self-selected, it constitutes a good representation of the entire industry. There are not enough data points for inferential statistics, but the description of the industry through its summary characteristics provides a good basis for reviewing overall trends and an opportunity to compare respondents' own casinos with others in the industry on key measures.



International Association of Certified Surveillance Professionals

[iacsp.org](http://iacsp.org)



[econnectglobal.com](http://econnectglobal.com)



[betravingknows.com](http://betravingknows.com)



[tgandh.com](http://tgandh.com)

*For questions or additional information about this report, contact:*

**Dan Cox, Client Services Manager | [dan@betravingknows.com](mailto:dan@betravingknows.com)**  
Tel: 775-329-7864 | Cell: 503-444-1971  
Raving – Reno, NV 89503 | [Betravingknows.com](http://Betravingknows.com)