Data-driven rodent monitoring in hospitality environments
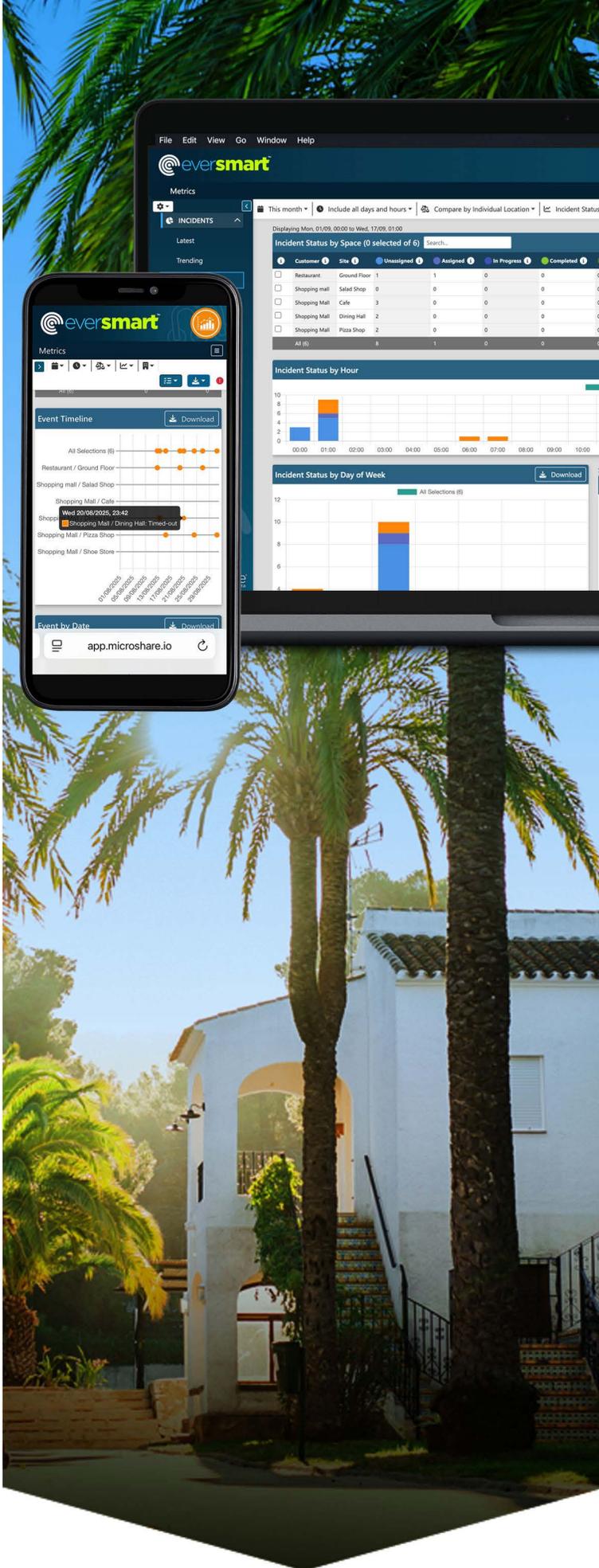
A case study of Innovative Pest Solutions and EverSmart™ Pest in a California hotel

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By Matt Medici and Jeff Stafford

Executive summary

Rodent activity presents a persistent operational, reputational, and regulatory risk for hotels, particularly in high-traffic regions such as Southern California. Traditional pest control programs often rely on periodic inspections and reactive responses, which can delay detection and increase risk.

This white paper presents a six-week case study conducted by Innovative Pest Solutions utilizing EverSmart™ Pest at a hotel property in Southern California. Sensors were deployed to continuously monitor rodent activity. Over the monitoring period, 90 rodent events were recorded, providing actionable data that enabled trend analysis. The deployment improved visibility into pest pressure, and informed proactive pest management strategies.

The results demonstrate the value of continuous monitoring technology in hospitality settings, highlighting how data-driven insights can support more efficient, responsive, and preventative pest control programs.

Introduction

The hospitality industry operates under strict health, safety, and brand standards. Even a single rodent sighting can result in guest complaints, negative online reviews, or regulatory scrutiny. As a result, hotel operators increasingly seek proactive pest management solutions that move beyond traditional bait-and-check approaches.

Innovative Pest Solutions partnered with a Southern California hotel to evaluate the effectiveness of smart monitoring technology using EverSmart™ Pest. The objective was to quantify rodent activity, identify temporal trends, and assess how real-time data could enhance pest management decision-making.

EverSmart™ Pest applies proprietary algorithms and Artificial Intelligence to evaluate sensor activity based on magnitude, duration and behavioral patterns. Activity that is unlikely to represent rodent behavior—such as brief disturbances, persistent heat sources like a vent, or non-persistent motion—is filtered out early in the process. The algorithm can cut-down the data "noise" that creates false positives in other systems by filtering out real-world challenges like nesting spiders or movement caused by a cleaner's broom. What remains is as close to precision as possible.
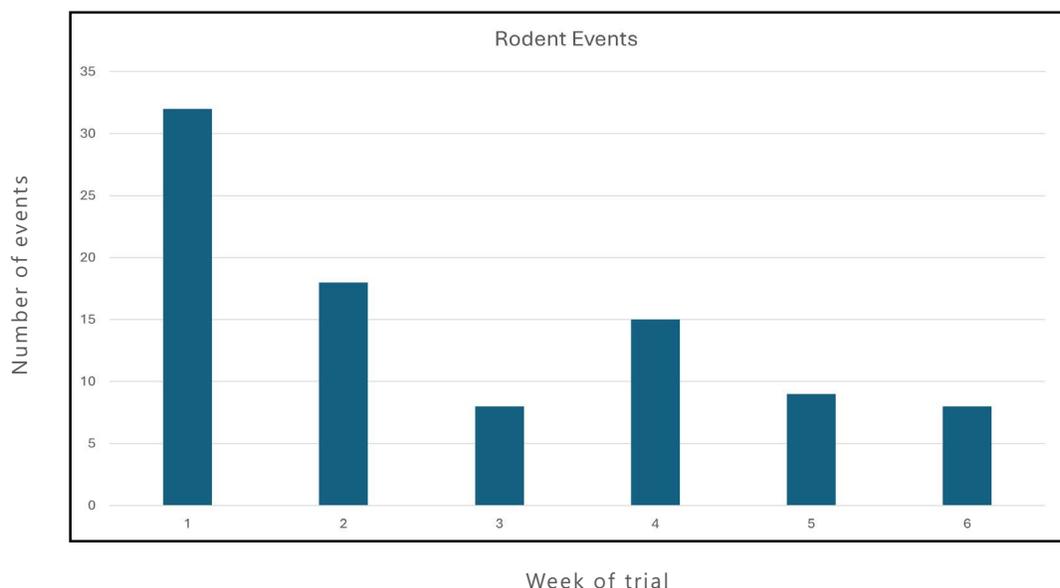
Site overview

- Property type: Large 4-star multistory hotel with 230 rooms and 8 floors situated on 22 acres. The hotel has 12 conference rooms, 80,000 square feet of conference space and a dozen on site restaurants.
- Location: Southern California
- Pest management provider: Innovative Pest Solutions
- Monitoring technology: EverSmart™ Pest
- Number of sensors Deployed: Seven

The sensors were strategically placed in areas identified as having elevated rodent risk based on historical activity, structural features, and environmental factors common to hospitality properties.

Monitoring period and methodology

- Monitoring duration: Six weeks
- Start date: Monday, Nov. 10, 2025
- End date: Sunday, Dec. 21, 2025

EverSmart Pest Sensors continuously monitored rodent activity throughout the study period. Each sensor recorded discrete rodent events, providing time-stamped data that allowed for weekly aggregation and trend analysis. Rodent events were defined as confirmed sensor activations consistent with rodent movement or interaction.

Rodent Events — bar chart showing Number of events by Week of trial: Week 1 ≈ 32, Week 2 ≈ 18, Week 3 ≈ 8, Week 4 ≈ 15, Week 5 ≈ 9, Week 6 ≈ 8.

Results and data analysis

Total recorded activity

Over the six-week monitoring period:

- Total rodent events: 90
- Average events per week: 15

This level of activity indicates sustained rodent pressure at the site and underscores the importance of continuous monitoring in hospitality environments.

Weekly distribution of rodent events

The distribution of rodent events by week was as follows:

Trend observations

- The highest concentration of activity occurred during Week 1, accounting for over one-third of all recorded events.
- A notable decline in activity was observed from Week 1 through Week 3, suggesting early intervention or environmental adjustments may have begun to reduce rodent pressure.
- Weeks 4 through 6 showed fluctuating but lower overall activity levels, indicating a stabilization of rodent presence rather than uncontrolled escalation.
- These trends demonstrate how real-time monitoring can quickly reveal changes in pest activity that may not be visible through traditional inspection schedules.

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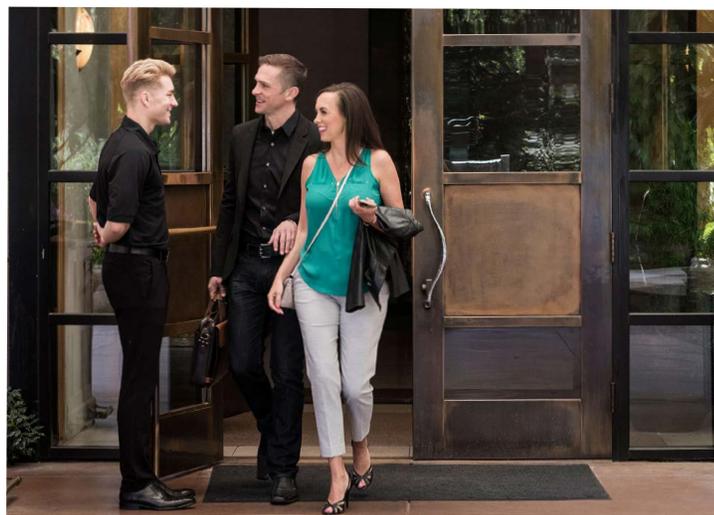
Operational insights

The deployment of EverSmart™ Pest provided several operational benefits:

1. **Continuous visibility**
   Unlike periodic manual inspections, sensors delivered uninterrupted insight into rodent activity, reducing reliance on assumptions or delayed reporting.
2. **Data-driven decision making**
   Weekly event data enabled Innovative Pest Solutions to prioritize service efforts based on actual activity levels rather than fixed schedules.
3. **Early detection and response**
   The high activity detected during Week 1 allowed for rapid assessment and targeted response before issues escalated.
4. **Improved documentation**
   Quantifiable data supported clear reporting for property management, aiding compliance, accountability, and transparency.

Implications for hospitality pest management

This case study highlights several broader implications for hotel operators and pest management professionals:

- Smart sensor technology can uncover hidden rodent activity that may otherwise go undetected.
- Early identification of trends allows for proactive interventions, potentially reducing long-term infestation risk and associated costs.
- Data-backed reporting strengthens communication between pest control providers and hotel management.

For hospitality properties where brand protection and guest satisfaction are paramount, continuous monitoring represents a valuable enhancement to integrated pest management (IPM) programs.

Conclusion

The six-week deployment of EverSmart™ Pest at a Southern California hotel demonstrated the effectiveness of smart monitoring technology in identifying and tracking rodent activity. With 90 recorded events and clear weekly trends, the data provided actionable insights that supported proactive pest control strategies. Innovative Pest Solutions' use of sensor-based monitoring illustrates how modern pest management programs can evolve from reactive treatments to predictive, data-driven solutions—particularly in high-risk environments such as hotels.

As the hospitality industry continues to prioritize health, safety, and guest experience, technologies like EverSmart™ Pest offer a compelling path forward for smarter, more effective pest control.

About Innovative Pest Solutions

Innovative Pest Solutions is a professional pest management company specializing in advanced, customized solutions for commercial properties. By integrating proven service methodologies with emerging technologies, Innovative Pest Solutions helps clients reduce pest risk while improving operational efficiency.

For more information, visit: innovativepestsolutions.com