White Paper
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Digital Surveillance
Return On Investment (ROI)

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Return-On-Investment for Digital Surveillance Systems

When evaluating Return-On-Investment (ROI), it can be helpful to look at the costs in a broad way. Most of the time, the only cost considered is the cost of the proposed initiative, and most of the time, managers will ask, "What if we do nothing?" What we must understand, though, is that there are ongoing costs associated with continuing in the status quo.

In determining ROI for a digital surveillance system, it can be difficult to determine because a surveillance system is primarily a preventative purchase, rather than a purchase related to income generation. However, there are circumstances and problems that can be either prevented or stopped via surveillance, before becoming a crippling problem, saving the company money. One such problem is employee theft or fraud.

Employee Theft:

According to the *2009 National Retail Security Survey* released by the National Retail Federation, the majority of merchandise losses, also known as shrinkage, were due to employee theft, costing the retail industry $15.9 Billion, representing almost half of their losses at 44%. Shoplifting accounted for $12.7 Billion, or 35% of losses. The total retail losses for the year of 2008 increased due to the tough economic climate to $36.5 Billion, up from $34 Billion in 2007[1] (NRF, 2009).

"The U.S. Chamber of Commerce estimates that theft by employees costs American companies $20 Billion to $40 Billion a year. To pay for it, it takes approximately $20 in sales to offset every $1 lost to theft…" **On a restaurant-specific basis, "…according to a 2005 study done by the National Restaurant Association, employee theft, be it from inadvertent mistakes, or employee unauthorized freebies to friends, averages $218 per employee each year."** "Worse yet, security experts call that estimate conservative.[2] (Dees, 2007)"

> "The average annual theft per restaurant worker is closer to $500 a year, according to a 2002 research study conducted by Batrus Hollweg International, a Dallas-based human-resources consulting and research firm. As part of a yearlong project, the firm surveyed 600 hourly employees between the ages of 18 and 30 in Texas and Florida, representing 25 different restaurant concepts. The research report- Productivity Crimes: Realities, Risks & Profit Potential- found that 27% of those surveyed had given food orders to family or friends but had not charged them, and more than 29% had taken food or drinks from the restaurant without payment. In addition, the study concluded that 18% of those questioned had pocketed cash that should have gone into the cash register, and 13% accepted cash from co-workers that should have been placed in the cash register. On a weekly basis 5% steal $5, another 2.6% steal $10 to $15, and 1.3% steal more than $20, according to the study[3]
> (Walkup, 2004).

[1] National Retail Federation, *2009 National Retail Security Survey*, June 16, 2009
[2] Pizza Magazine Quarterly, *Employee Theft- The Enemy Within*, March 2007
[3] Nation's Restaurant News, *Theft Protection Plan Key to Locking In Profits*, May 24, 2004

Employee Fraud:

Employee fraud can be even worse than employee theft. **According to the Association of Certified Fraud Examiners' *2010 Report to the Nations*, the typical organization loses 5% of its annual revenue to fraud.** The median loss caused by the occupational fraud cases in their study was $160,000, and they lasted a median of 18 months before being detected. What's more, more than 85% of the fraudsters in their study had never been previously charged or convicted for a fraud-related offense. Based on their statistics, fraud costs the average business $4,500 per employee per year[4] (ACFE, 2010).

Based on employee theft and fraud alone, the ROI for a digital surveillance system can be virtually immediate. Given the research statistics, if an employee costs an average of $218 due to theft, and a drive-thru employs 5 people, they could total an average of $1,090 per year.

When looking at fraud, if the restaurant earns $2 Million per year (such as the average for McDonald's franchise owners[5]), the 5% average annual loss of revenue would amount to $100,000! If the restaurant earns $300,000 (such as the average for Baskin Robbins[6]), that same 5% would amount to $15,000 per year.

Compare the figures from both employee theft, and employee fraud to those of the top-of-the-line security systems in the industry: Big Dog Surveillance Systems from R.F. Technologies, Inc. Their security systems range from $650 for 250 GB of storage and 4 cameras, all the way up to a $3,995 system with 1 TB of DVR storage and 16 cameras.

Total Cost of Ownership (TCO):

Total Cost of Ownership plays a huge role in determining ROI. The total cost of ownership is the cost for an organization to acquire, support and maintain the product. For some acquisitions, the initial purchase cost is only the tip of the iceberg when looking at ROI. See the below assessment for the total cost of ownership of the Big Dog Surveillance System.

TCO = cost to buy + cost to install + cost to operate + cost to maintain.

Cost to Buy:

The cost to purchase Big Dog Surveillance equipment ranges from $650 for 250GB of DVR storage and 4 cameras, to $1,995 for 8 cameras and 500GB of DVR storage, and to $3,995 for 16 cameras and 1TB of DVR storage.

Cost to Install:

[4] Association of Certified Fraud Examiners, *Report to the Nations: Occupational Fraud and Abuse*, 2010
[5] Direct figure from McDonald's COO Ralph Alvarez, Franchise Times, *McMakeover*, 2006.
[6] Les Christie, *Franchises: How Much Can You Earn?*, CNN Money, July 1, 2004

Big Dog Surveillance Systems are often installed by the end user. The installation process consists of running wires and mounting cameras, and connecting the office equipment, such as DVR unit, camera power supply, keyboard, monitor and mouse.

Though many customers install the units on their own at virtually no cost, some prefer to hire an installer. The cost to install the equipment, depending on the number of cameras and locations, averages about $1,000.

Cost to Operate:

Cost of operation consists of electricity costs, and time costs associated with an employee reviewing video footage. Though electricity costs vary by location, the surveillance cameras on the Big Dog systems draw virtually the same power as a 30-watt light bulb, and the DVR unit draws the same power as a basic personal computer.

Cost to Maintain:

The Big Dog Surveillance System typically requires equipment maintenance after about 5 years of ownership. Since the costs vary so much, it cannot be quantified. Maintenance depends greatly upon installation methods. When customers place the DVR unit in a poorly ventilated location, such as mounting it in the ceiling or wall, it can prevent heat dissipation and wear the unit out quickly. That's why Big Dog Surveillance Systems provide free customer support, 24-hours a day, 7-days a week, to advise customers with questions about proper installation or usage.

Based upon all those figures, the main factor in evaluating TCO is the initial acquisition cost. Installation is often free, operational costs are just basic electricity costs, and maintenance is low if properly installed.

Based upon the cost of employee theft, fraud, and the total cost of ownership, the ROI for the Big Dog Surveillance System can be achieved within the first year of ownership.

There are many other scenarios to take into account when considering investing in a surveillance system. A surveillance system can provide an accurate report for an insurance claim in case of a fire or an equipment malfunction, or even provide law enforcement with the identity of a robber. The value of a surveillance system can be immeasurable.

<u>REFERENCES</u>:

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