

CALCULATING ROI ON FIRE SAFETY INSPECTIONS FOR JOINT COMMISSION COMPLIANCE



COMPLIANCE SOFTWARE RETURN ON INVESTMENT (ROI)

INTRODUCTION

This article focuses on web-based software that is used to schedule, track, and document fire and life safety equipment inspections. The software replaces manual, paper-based procedures with automated data collection solutions. This type of solution is most commonly used to assist companies in complying with mandatory workplace safety regulations that ensure a secure physical environment.

Traditional inspection processes are heavily paper-based. Automating the process can save time and money while increasing productivity and efficiency.

Traditional Process



Automated Process



The diagrams above clearly show a reduction in manual processes, but most software purchases require additional justification. Medical facilities want to know why they should buy software and how it will save them money. This document is designed to provide information that will assist in substantiating the value of inspection management software for your organization.

CALCULATING ROI

Financial returns are typically not the primary reason for purchasing software that assists in tracking and proving inspection compliance, but the ability to show a cost savings will help justify project funding. Inspections are necessary to prove compliance with authorities having jurisdiction (AHJ) and an event of non-compliance can be costly. But does capturing inspection information electronically provide better, more valid results than performing inspections manually with a paper logsheet? Is there true value in electronic data capture? Most software purchases need some type of justification and an ROI analysis can provide a measure of substantiation or invalidation.

There are two types of costs associated with purchasing and implementing new software. The first is monetary cost and second is employee resources. An ROI can help validate whether or not an organization will realize both financial and resource savings. An ROI will also assist in maximizing the use of limited dollar resources. If a company's resources are constrained and multiple projects are competing for the same funds, an ROI can support the decision-making process.

Because of its basic simplicity, ROI is a very popular metric. There are many opinions and options on how to calculate ROI. The method used can involve factors like net present value and the time value of money. These in-depth ROI analyses are clearly valuable when evaluating software packages that have large price tags. Given that this example focuses on an economically priced web-based solution, sticking to basics will suffice. A simple calculation will measure the overall benefit of an investment, expressed as a percentage of the amount invested.

$$\text{ROI} = \frac{\text{Return}}{\text{Investment}} = \frac{(\text{value of benefits}) - (\text{cost of benefits})}{\text{Cost of benefits}}$$

COMPLIANCE SOFTWARE CALCULATION COMPONENTS

Prior to calculating ROI it is important to determine relevant cost and benefit factors. There are hard costs which can be reasonably figured out and there are soft benefits that can be subjective and therefore harder to quantify. Hard cost are related to items such as number of inspections being performed, number of people performing inspections, and the salaries associated with those resources. The soft benefits are intangible items such the value of eliminating missed inspections or always being audit ready. Also keep in mind that some costs are one-time and others are reoccurring.

In determining hard costs for typical safety or environmental health & safety inspections, the following should be considered:

- The average number of inspections performed daily per inspector.
- The number of days per month spent performing inspections.
- The number of inspectors.
- The amount of time inspectors spends manually documenting information during each inspection.
- The average hourly wage of the inspectors.
- The amount of time spent doing manual data entry and filing for each inspection.
- The average hourly wage of employees performing data entry and filing.
- The amount of time spent compiling reports monthly.
- The average hourly wage of employees compiling reports.
- Documentation storage costs

In determining soft benefits, consider the following:

- Faster completion of inspections.
(InspectNTrack customers verify that they spend 1/3 of the time on each inspection.)
- Elimination of paper log sheets.
- Mitigation of risk and liability.
- 100% accurate, certifiable inspections.
- Rapid detection of discrepancies.
- Elimination of missed inspections.



COMPLIANCE SOFTWARE RETURN ON INVESTMENT (ROI)

ROI IN USE

The following example is based on actual customer. It is a small medical facility using web-based compliance software to conduct 1050 inspections per month on various items such as eye-wash stations, exit signs, chemical inventory, hazardous materials, laboratory equipment and lab safety. Only hard costs are calculated into the example.

Time Calculation Table (minutes converted to fraction of an hour)

1 minute = .0167	5 minutes = .083	Calculations are based upon reducing data collection time by 50% and data entry time by 95% when using InspectNTrack software.
2 minutes = .033	10 minutes = .167	
3 minutes = .05	15 minutes = .25	

	Manual Process	Using InspectNTrack Software
Manual Documentation		
Amount of time employees spend manually documenting information during each inspection	0.05	0.0250
Average hourly wage of employees completing inspections	\$25.00	\$25.00
Cost Per Inspection for manual documentation	\$1.25	\$.63
Data Entry & Filing		
Amount of time performing data entry and filing for each inspection	0.0830	0.0125
Average hourly wage of employees performing data entry and filing	\$15.00	\$15.00
Cost Per Inspection for data entry/filing	\$1.25	\$0.19
Total Cost of manual documentation and data entry/filing per inspection	\$2.50	\$0.81

	Manual Process	Using InspectNTrack Software
Inspections		
# of Inspections per day per inspector	35	35
# of Inspectors performing inspections	2	2
# of days per month inspections are performed	15	15
Total # of items inspected	1050	1050
Total cost of manual documentation and data entry/filing	\$2619.75	\$852.34
Inspection savings per month using InspectNTrack Software		\$1767.41
Reports		
Amount of time spent compiling reports monthly	4.00	0.4
Average hourly wage of employees compiling reports	\$25.00	\$25.00
Cost of time spent compiling reports	\$100.00	\$10.00
Reporting savings per month using InspectNTrack Software		\$90.00
Total savings per month using InspectNTrack Software		\$1857.41
Estimated price of web-based system with 12-month subscription		\$4800.00
InspectNTrack system investment returned in only 3.0 months		

$$\text{ROI} = \frac{\text{Return}}{\text{Investment}} = \frac{(\text{value of benefits}) - (\text{cost of benefits})}{\text{Cost of benefits}}$$

$$\text{ROI} = \frac{(\$1857.41 \times 12 \text{ months}) - (\$4800)}{\$4800} = 3.64 \times 100 = 364\% \text{ ROI}$$

ROI IN USE (CONTINUED)

The ROI shows that the facility’s investment in inspection management software paid for itself in only three months, providing a 364% return on their investment. Note that web-based software was selected, which has a lower cost of entry than an on-premise software system. A larger company inspecting thousands of checkpoints would likely realize more substantial savings. Within larger companies, use of a web-based system also eliminates a portion of IT costs, which were not calculated in this example.

BEYOND THE ROI: OTHER REASONS TO AUTOMATE

Although an ROI is an important part of the decision-making process, there are many compelling factors for automating fire and life safety equipment inspections. The Joint Commission requires health care organizations to comply with the NFPA’s Life Safety Code®. The Joint Commission has created the “Life Safety” (LS) chapter as part of the Standards Improvement Initiative, which includes all the Joint Commission requirements regarding Life Safety Code compliance. Inspection automation software can be utilized proactively as part of the optional Building Maintenance Program (BMP). An automated system will document routine inspections and associated corrective action maintenance, which will demonstrate the effectiveness of a BMP. Other reasons that justify acquiring web-based compliance inspection software include:

Types of Inspections <ul style="list-style-type: none"> • Fire extinguishers • Valves • Smoke alarms • Sprinklers • Fire doors • Exit doors • Exhaust hoods • Safety Inspections • Lab Inspections • Hazardous Material 	Business Value <ul style="list-style-type: none"> • Compliance with regulatory or legal mandates • Increased data integrity • Mitigation of risk and liability • Promotes lean processes 	Operational Value <ul style="list-style-type: none"> • Faster data entry with greater accuracy and improved efficiency • Standardization of procedures • Proactive management of inspections • Easy access to data
	Technology Value <ul style="list-style-type: none"> • Minimal IT involvement • Automatic software updates • Built-in data security • Enhanced disaster recovery 	Economic Value <ul style="list-style-type: none"> • Improved productivity • Reduction in paper usage • Potential reduction in operating costs

KEEPING IT REAL

As with any decision-making tool, caution should be used when utilizing an ROI calculator. It is important to understand the assumptions being made in regards to soft benefits and to determine their rationality. It is prudent to test “what if” scenarios, since changing one parameter can dramatically alter the ROI results (ex: payback period of 12 months rather than 3 months). ROI only evaluates the financial strength or weakness of software, not the response of the resources that will use the software or their proficiency in adapting to a new process. Even if the ROI looks exceptional, it is essential to gain support and buy-in from both management and the inspection team. No software program will be successful without the commitment by the team to learn how to use the software and to use it as intended.

ADOPTING TECHNOLOGY DRIVEN COMPLIANCE

Innovations in mobile technology have had a profound impact on the business world. Computers and software have enabled organizations worldwide to work more efficiently and productively. New developments have allowed workers to become more mobile and streamline processes that have traditionally been paper intensive. Mobile computing/automation technology can electronically record, transmit, update and save critical information for compliance driven processes. An automated process has the potential to cut inspection times in half. It also allows for immediate evaluation of inspection results. Regardless of the type of inspection being performed, it is clear that incorporating technology into the process adds value and peace of mind.

Using the information provided in this document as a starting point, an ROI can be calculated. It’s the first step in moving your organization closer to technology-driven compliance.

ABOUT InspectNTrack

InspectNTrack software is a web-based equipment management and inspection solution designed to schedule, track, and document activities on any type of equipment or location. Used with or without Pocket PC's and barcodes, it is the ideal solution for compliance-based inspections regulated by any AHJ. InspectNTrack is available in four versions. From Starter to Enterprise, there's a version to meet the need of any size company.

To learn more about InspectNTrack visit www.BradyID.com/inspectntrack.



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