Security of Paper Records & Document Shredding

Sponsored by Cintas
Independently conducted by Ponemon Institute LLC
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Part 1. Introduction

Ponemon Institute research has shown organizations that do not take precautions to dispose of confidential documents securely face the likelihood of a data breach. It is important that organizations establish clear guidelines and policies for the destruction of sensitive documents to ensure thieves cannot steal confidential business and personal information.

Cintas and Ponemon Institute are pleased to present the results of a research study on the risks to documents in the workplace. The purpose of the study was to determine current practices to secure sensitive documents during the shredding and destruction process. In this study, we surveyed 705 individuals responsible for making decisions about the use of document shredding services for their company.

The following are the key findings from this research:

- One-third of respondents do not have a policy for the secure destruction of confidential documents. Among those respondents who say their organization has a policy, more than half (51 percent) say it does not cover the secure destruction of hard drives.

- While more than half (55 percent) train their employees on the secure disposal of confidential documents, only 38 percent say they are confident that the training helps ensure the secure disposal of confidential documents.

- The primary reason for using an outside shredding service to destroy and shred confidential information is because respondents believe it more effective than relying on employees to properly shred and/or destroy confidential information.

Further evidence of the importance of ensuring the proper destruction of paper documents was shown in an earlier study conducted by Ponemon Institute, the Security of Paper Documents in the Workplace. According to the findings, 71 percent of IT practitioners in U.S. companies said they were aware of an incident in which sensitive or confidential paper documents were lost or misplaced. Further, more than half (53 percent) of these respondents believed that employees are putting these documents at risk by leaving them at communal printers, in meeting rooms or at meetings held outside the office.

As evidence of the risk to confidential information, 77 percent of respondents say their companies shred less than half of all documents containing sensitive or confidential information before disposal. The relatively low percentage of shredded paper documents suggests that companies are at risk for failing to secure sensitive information.

What can companies do to protect confidential and sensitive documents? Most important is to have strict enforcement of non-compliance with document handling and disposal procedures and have rigorous compliance of procedures for monitoring document protection and safe disposal of documents.

Training and awareness of what information the company determines to be confidential and sensitive is critical. Employees, contractors and third parties need to understand their role in disposing of sensitive and confidential information. In turn, companies should help employees become more accountable by making it efficient and convenient to safeguard and dispose of paper documents.

1 Security of Paper Documents in the Workplace, conducted by Ponemon Institute and sponsored by the Alliance for Secure Business Information, September 30, 2008.
Part 2. Key findings

In this section we present results for a representative sample of 705 individuals responsible at some level for the selection of a document shredding company.

It is critical to have policies and employee training on the secure destruction of confidential documents. Figure 1 shows 67 percent of respondents have a policy for the secure destruction of confidential documents. While it is important to have such a policy, it may not be as comprehensive as it needs to be. Only 32 percent of respondents say their organization’s secure destruction policy covers the safe disposal of hard drives and other mobile data-bearing devices. Training and awareness programs are not a guarantee that employees are safeguarding paper documents. Fifty-five percent train their employees on the secure disposal of confidential documents.

Figure 1. Availability of policies and training on secure document destruction

Despite the importance of employee training, Figure 2 shows only 14 percent say they are very confident that employee training helps ensure the secure disposal of confidential documents.

Figure 2. How confident are you that training helps ensure the secure disposal of confidential documents?
Outside shredding services are believed to protect confidential paper documents. Figure 3 reveals 73 percent of respondents believe it is more effective than relying on in-house shredding and disposal by employees. Forty-three percent say their organization does not have the resources to handle shredding and disposal in-house. Forty-two percent say compliance with privacy and data protection regulations is a primary reason for outsourcing shredding and disposal services.

**Figure 3. Reasons for using an outside shredding service**

Two responses permitted

- More effective than relying on employees to properly shred and/or destroy confidential documents: 73%
- Insufficient resources to handle document shredding and destruction in-house: 43%
- Ensures compliance with privacy and data protection regulations: 42%
- Other: 4%

Participants in this research were also asked to rate factors that they believe are most important when selecting a document shredding service. Figure 4 reports the top six characteristics, which include convenience, reputation, responsiveness, trusted security procedures, certification and the value/cost of services.

**Figure 4. What are the most important characteristics of vendors engaged by your company to shred and/or destroy confidential documents?**

Respondents could select up to three top choices

- Convenience: 29%
- Reputation: 28%
- Responsiveness: 28%
- Trusted security procedures: 27%
- Certification: 26%
- Value/cost of services: 26%
The following bar charts summarize respondents’ level of trust in their outside service provider’s security procedures and practices. Please note that each attribution is rated using a 0 to 10 scale from no trust to very high trust (with mean response at 5.5).

Figure 5 shows that respondents hold a fairly high level of trust that the service provider will comply with agreements on document shredding and disposal. Accordingly, two thirds of respondents rate this attribute at or above seven.

**Figure 5. I trust that all documents are destroyed per our service provider's agreement**  
Rating from 0 = strongly disagree to 10 = strongly agree

![Bar chart showing trust levels for document destruction](image)

Figure 6 shows that respondents hold a fairly high level of trust that the service provider will follow appropriate security procedures on a consistent basis when shredding or disposing of confidential documents. Here again, 66 percent of respondents rate this attribute at or above seven.

**Figure 6. The service provider's security procedures will be followed consistently**  
Rating from 0 = strongly disagree to 10 = strongly agree

![Bar chart showing trust levels for consistent security procedures](image)
Figure 7 shows respondents hold favorable impressions of the service provider’s security practices when shredding or disposing of confidential documents. Here again, 66 percent of respondents rate this attribute at or above seven.

**Figure 7. I feel that my service provider provides “top of the line” security**
Rating from 0 = strongly disagree to 10 = strongly agree

![Bar graph showing responses for Figure 7](image)

Figure 8 shows that respondents have a high level of confidence that their service provider helps the organization adhere to regulatory and legal obligations (including privacy laws). Sixty-five percent of respondents rate this attribution at or above seven.

**Figure 8. I am confident that the service provider helps my organization adhere to regulatory and legal requirements**
Rating from 0 = strongly disagree to 10 = strongly agree

![Bar graph showing responses for Figure 8](image)
Figure 9 shows that most respondents hold favorable impressions about their service providers’ ability to communicate the security procedures used by them to ensure confidential documents are kept secure during shredding and disposal process. Sixty-four percent of respondents rate this attribute at or above seven.

**Figure 9. The service provider ensures I have a clear understanding of the security procedures used**
Rating from 0 = strongly disagree to 10 = strongly agree

![Bar chart showing responses from 0 to 10]

Figure 10 shows that most respondents would be inclined to recommend their service provider to a friend or colleague. Sixty-four percent of respondents rate this attribution at or above seven.

**Figure 10. How likely would you recommend your provider of document shredding services to a friend or colleague?**
Rating from 0 = never to 10 = very likely

![Bar chart showing responses from 0 to 10]
Part 3. Concluding thoughts about document security

As part of this research, Ponemon Institute conducted a meta analysis of approximately 46 studies involving larger-sized organizations to capture facts about the security of documents in the workplace. These facts provide insight into the risks created by not ensuring the proper handling and disposal of confidential information contained in paper documents.

The main security threat in the protection of paper documents is mostly the negligent employee or third party. According to IT and IT security practitioners the malicious or criminal insider is least likely to be a threat. This finding points to the importance of employee training and awareness programs. According to the study on the Security of Paper Documents in the Workplace, paper documents are most risk in a trash bin, when initially printed and in a communal printing tray and at an office desk.

It is very difficult to safeguard sensitive and confidential information contained in paper documents. Sixty-eight percent of IT security practitioners strongly agree or agree that the protection of paper documents is getting harder to achieve. Therefore, to reduce the risk to paper documents, companies should have strict policies describing how sensitive and confidential documents should be disposed of, programs to train employees and other insiders to follow these policies and easy access to shredding machines and third-party shredding services.

How challenging is it to keep confidential and sensitive information from improper access? On average, more than half of a company’s sensitive or confidential information is contained within paper documents\(^2\) and, therefore, should not be easily available to all employees. However, IT security practitioners believe controlling access to paper documents with sensitive and confidential information can be as or more difficult than controlling access to electronic files.

Companies are not allocating sufficient resources to the protection of paper documents. Despite the potential for a costly data breach involving sensitive and confidential information in paper documents, this is a risk that doesn’t receive an appropriate budget. According to 69 percent of IT security practitioners in Ponemon Institute studies, less than 10 percent of a company’s data security budget is dedicated to the protection of paper documents.

Document images contained on edge points create a significant security risk for a company. Fifty-five percent of IT security practitioners strongly agree or agree that document images contained on copying machines, printers and fax machines are a threat to a company’s confidential information. Approximately 51 percent of IT security practitioners say their companies’ data security controls include the oversight of these edge devices.

Dumpster diving incidents are not in decline. Only 27 percent of IT security practitioners believe that the theft of sensitive and confidential information in dumpsters is in decline. In fact, dumpsters and other trash receptacles are targets for criminals looking to steal a company’s sensitive and confidential information.

Part 4. Methods

A random sampling frame of 16,501 individuals responsible for making decisions about the companies document shredding services were selected as participants to this survey. As shown in Table 1, 818 respondents completed the survey. Screening and failed reliability checks removed 113 surveys. The final sample was 705 surveys or a 4.3 percent response rate.

<table>
<thead>
<tr>
<th>Table 1. Sample response</th>
<th>Freq</th>
<th>Pct%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sampling frame</td>
<td>16,501</td>
<td>100.0%</td>
</tr>
<tr>
<td>Total returns</td>
<td>818</td>
<td>5.0%</td>
</tr>
<tr>
<td>Screened or rejected surveys</td>
<td>113</td>
<td>0.7%</td>
</tr>
<tr>
<td>Final sample</td>
<td>705</td>
<td>4.3%</td>
</tr>
</tbody>
</table>

Pie Chart 1 reports the industry segments of respondents’ organizations. This chart identifies financial services (13 percent) as the largest segment, followed by retailing (10 percent) and manufacturing (10 percent).

Pie Chart 1. What industry best describes your organization's primary industry focus?

Pie Chart 2 reports the organizational level of respondents’ current position. Forty-eight percent of respondents are at or above the supervisory level.

Pie Chart 2. Organizational level that best describes your current position
As shown in Pie Chart 3 56 percent of respondents are from organizations with a worldwide headcount of 1,000 employees or less.

Pie Chart 3. Worldwide headcount

<table>
<thead>
<tr>
<th>Headcount Range</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 250</td>
<td>22%</td>
</tr>
<tr>
<td>Less than 500</td>
<td>18%</td>
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<tr>
<td>500 to 1,000</td>
<td>16%</td>
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<tr>
<td>1,001 to 5,000</td>
<td>14%</td>
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<tr>
<td>5,001 to 25,000</td>
<td>14%</td>
</tr>
<tr>
<td>25,001 to 75,000</td>
<td>13%</td>
</tr>
<tr>
<td>More than 75,000</td>
<td>13%</td>
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</tbody>
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Part 5. Caveats

There are inherent limitations to survey research that need to be carefully considered before drawing inferences from findings. The following items are specific limitations that are germane to most web-based surveys.

**Non-response bias:** The current findings are based on a sample of survey returns. We sent surveys to a representative sample of individuals, resulting in a large number of usable returned responses. Despite non-response tests, it is always possible that individuals who did not participate are substantially different in terms of underlying beliefs from those who completed the instrument.

**Sampling-frame bias:** The accuracy is based on contact information and the degree to which the list is representative of individuals who are responsible for making decisions about the companies document shredding services. We also acknowledge that the results may be biased by external events such as media coverage. We also acknowledge bias caused by compensating subjects to complete this research within a holdout period.

**Self-reported results:** The quality of survey research is based on the integrity of confidential responses received from subjects. While certain checks and balances can be incorporated into the survey process, there is always the possibility that a subject did not provide a truthful response.
Ponemon Institute

Advancing Responsible Information Management

Ponemon Institute is dedicated to independent research and education that advances responsible information and privacy management practices within business and government. Our mission is to conduct high quality, empirical studies on critical issues affecting the management and security of sensitive information about people and organizations.

As a member of the Council of American Survey Research Organizations (CASRO), we uphold strict data confidentiality, privacy and ethical research standards. We do not collect any personally identifiable information from individuals (or company identifiable information in our business research). Furthermore, we have strict quality standards to ensure that subjects are not asked extraneous, irrelevant or improper questions.