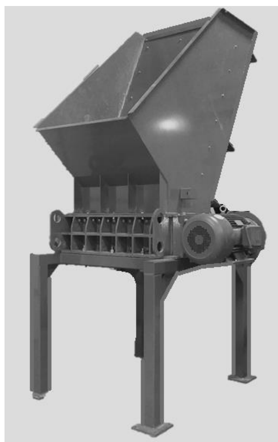

# CALCULATING ROI FOR A SHREDDER WITHOUT A DIRECT REVENUE STREAM


## ABSTRACT

It is challenging for business owners and operations managers to justify the cost of an industrial shredder that is not associated to a direct revenue stream. The purpose of this paper is to provide some insight as to other ways to assess business value and further prove the ROI case to justify the shredder purchase.


August, 2019

# Table of Contents

# Introduction

There are many reasons that a company seeks to purchase an industrial shredder. Some of these reasons are unrelated to a direct revenue stream. The decision is typically due to a regulatory requirement or quality control standard. Almost all industries are impacted by regulatory requirements when it comes to waste and waste handling. In cannabis its hazardous waste, while in the automotive world it is adhering to the IATF specifications. In addition, there are many other regulatory agencies and certifications that would cause a business to consider the purchase of a shredder as well as monetary benefits.

## Problem Statement

A shredder is an expensive piece of capital equipment that will ultimately have an impact on the bottom line. How can a company justify the cost of the industrial shredder, without any additional ROI support from a direct revenue stream?

## Examples of ROI

### Cost of non-compliance

The immediate ROI to your company is that you will be in compliance with inventory specific regulations. Ideally you can gather information required to include this contributing ROI, also consider and gather the actual cost of each non-compliance.

(occurrence) x (cost of non-compliance) x (time to correct) = cost of non-compliance

### Time and labor value of automation

Shredders provide automation for the waste handling operation which allows operators, who would otherwise be engaged in less effective efforts for destruction of product, to return to production activities that reduce the cost of overhead labor and increase operational efficiencies.

(# of employees) x (hours) x (labor cost/hour) x (lifespan of shredder) = total cost of labor hours

Example: Waste management activity that would normally take 5 laborers versus 1 with shredding

| Annual Cost without Shredder | |
|---|---|
| $/hour | $ 50.00 |
| Employees | 5 |
| Hours/week | 20 |
| Weeks/year | 52 |
| | |
| Annual cost | $ 260,000.00 |

| Break Even analysis of shredding system | |
|---|---|
| Initial cost | $ 150,000.00 |
| Electrical (annually) | $ 6,500.00 |
| Other costs | $ 2,000.00 |
| | |
| $/hour | $ 50.00 |
| Employees | 1 |
| Hours/week | 20 |
| Weeks/year | 52 |
| Labor cost/year | $ 52,000.00 |
| | |
| First year cost | $ 210,500.00 |
| Second year cost | $ 60,500.00 |
| | |
| First year savings | $ 49,500.00 |
| Second through x year savings | $ 199,500.00 |

### The Intangible

There is something to be said for a company that invests in directly maintaining the quality of their product. Many times shredding operations include the destruction of defective and non-conforming products. The ability to shred these items in-house ensures that the defective product will not find its way onto the market and is the way to absolute peace of mind in quality control. For this reason above, controlling internally the destruction of defective or surplus products can be viewed as preventative insurance.

Even though damage to a brand is difficult to quantify, let's use a medical device manufacturer as an example. Say there was a batch of equipment provided that did not meet quality control spec and could be harmful to customers. If it is not properly destroyed, it could find its way into the public via other means. By not preventing this effectively, this manufacturer risks significant loss, not only in capital, but in public good will.

When adding up the costs of what can be measured such as:  diminished sales, lower revenue, negative brand awareness, legal costs, etc., the comparative costs of a shredding system is quite easy to justify.

## Summary

Shredders can provide a strong ROI model regardless whether they are purchased in relation to a direct revenue stream. The ROI business case for justifying the purchase of the shredder can be very similar to other production equipment that increase efficiencies, assist in managing quality control, or increase automation which all result in an improved operational cost. Additional cost savings for your company may exist with regard to defective parts that are not outlined in this ROI model, for instance; transfer costs, parts handling costs, inspection costs, storage costs, inventory costs, etc. that your quality, purchasing or operations managers may be able to directly provide.

It is very difficult to assess a true value to the protection of brand. And here again just like with identifying additional direct cost savings there may be other similar soft savings throughout your organization that can be gained by purchasing a shredder. Regardless if you can identify additional cost saving opportunities within your organization, there is a clear ROI justification that supports the purchase of the industrial shredder to support and address IATF other industry requirements.