

Computerized Shipping Systems: Return on Investment

White Paper

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Many executives are unaware of how a computerized shipping system can increase profit within their organization more often than not. They view an investment in shipping technology as an expense; failing to see the potential return on investment (ROI). This paper provides a summary of 14 different ways a computerized shipping system can save an organization money or increase revenue. Most of the points are further elaborated and explained in my book, *Computerized Shipping Systems: Increasing Profit & Productivity Through Technology*. I will point out the specific chapters where appropriate, for those of you who want to learn more. This paper is not intended to be a comprehensive analysis. It will hopefully provide a provocation for executives to become more aware of how shipping means and practices can impact the bottom line.

In order to do a complete ROI study, one would have to do some upfront research. You would need to know what the current payments are for the present system. This could be a carrier provided system or it could be a system provided by a third party. You should find out what the lease payments are. What amounts do you pay for maintenance costs, rate change insurance or fees, and label, ribbon and other form costs. You should also find out the total amount that is annually paid for freight.

For the purpose of our example, we will assume that a company is shipping 200 packages a day, pays an average of \$10 per package for freight, and has labor costs of \$20 an hour.

The largest single savings that can be generated from a computerized shipping system are from the elimination of errors; however, most people do not like to admit that they are making mistakes. I think the best way to discover how many errors may be occurring in your organization is to observe the shipping clerk process a package or two. Have the clerk go slowly, and simply count the number of keystrokes necessary to complete the process. Then follow the paperwork to the accounting department, and count the keystrokes needed to add the freight charges and complete the order. It typically takes 100 keystrokes to ship a package and update the host computer. If we multiply that by 200 packages a day, that comes to 20,000 keystrokes a day, multiplied by 22 working days a month, equals an astounding 440,000 keystrokes! A Department of Defense study

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states that “there will be one error in 300 keystrokes”. If we do the math, we would find 1,466 errors per month, or, about 66 per day.

The reality is that most mistakes go unnoticed, so this is the time to determine how many mistakes are occurring in your operation - mistakes that are costing your company revenue. A Texas A & M University study concludes, “It costs \$50 to correct an error.” The reason is that a mistake in shipping typically means that the wrong product was sent and has to be picked up; normally the company shipping the product pays that expense. Additionally, it includes the cost to reship the *correct* product, and many times, there is the added expense of expedited freight to keep your client happy. And, let’s not forget the cost of administrative time to change and correct the invoices. Clearly, errors are easily a *\$50 cost each*. So, even if we are extremely conservative, and use only 7 mistakes a day as significant, (which is 99.99% accuracy) at \$50 each, our costs come to \$350 a day; multiplied by 22 working days, \$7,700 a month and \$92,400 per year! This alone can justify the investment in a computerized shipping system. You can read more about this in Chapter 2, *Reengineering the Shipping Process*.

Let’s next consider the direct saving in labor gained from eliminating the manual rekeying of data in the accounting department. Ask your accounting clerk how long it takes to type in the freight charges, the 18 character alphanumeric tracking number, other data, and the keystrokes necessary to complete the order. Let’s say it takes two minutes per order, multiplied by 200 packages, or 6.5 hours a day. This is assuming that this clerk types non-stop and does not take a single break or gets interrupted. At a labor rate of \$20/hr with benefits, multiplied by 6.5 hours, we have a total labor expense of \$130 a day; \$2,860 a month and \$34,320 a year. A computerized shipping system can cut labor costs significantly.

Another big mistake that companies make, is that they don’t shop for the best carrier for the level of service they need. *The Official Express Management Guide* (OESG)(1995) informs us that “40 to 50% of packages sent next day delivery could be sent by a less costly means of transportation.” Let’s say that your company, shipping 200 packages per day, sends 25% next day, or 50 per day. Let’s even pretend you have a good discount and pay an average of \$25/pkg, and 50% of those could be sent out for less. It is not unusual to find that the same packages could get there for \$5 at the same time or sooner. Packages shipped by a guaranteed ground service, for example, can get there the next day or second day at a fraction of the cost. This is a saving of \$20 per package x 25 packages or \$500 per day. On a monthly basis, the savings would be \$11,000, and \$132,000 a year. This comes to an overall reduction in freight costs of 25%, completely in line with the OESG conclusion that “80% of shippers are overpaying freight costs by 20-80%”.

If the potential for savings and improving shipping room productivity can be so significant, why isn’t every VP of Operations taking a good hard look at their internal

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shipping operations and acting, if necessary? Here is the reason. Most companies bill their customers for the freight charges. It just isn't important because the customer is paying for the freight anyway. That is why it is important to find out if it is your company that pays for the freight and what percentage of the time. No one bills customers for freight 100% of the time. And many times the costs for shipping air packages are absorbed by the shipper because they are internal sales or executive materials.

Since we are on the subject of reducing shipping charges, let's look at the cost of having a "free" system. We've all been taught that "there is no such thing as a free lunch." And it is true. These systems provided by the carriers are built into the cost of doing business with that shipper. The consequence is that the shipper is not getting as significant a discount as he could or deserves. I know this because I know many former UPS, FedEx, and Airborne managers, including people whose job it was to calculate the amount of discount a shipper should receive. As indicated in Chapter 16 of my book, *Beware of Carriers Bearing Free Gifts!*, a company that gives up their "free" shipping system can obtain a better discount from their carrier of 3-5% by renegotiating their contract after installing an independently provided multi-carrier shipping system." Following the numbers from our example, 3% of your yearly freight charges of \$528,000 comes to \$15,840 a year.

Now, let's address why it is important to look "inward" towards reducing shipping costs, even in instances where the customer is paying the freight charges anyway. A VP of Finance might not even notice freight charges are a problem if on an income statement, the expense line item for freight paid is comparable to the freight charges collected. Consequently, the freight charges would not be considered a significant expense. The problem with this thinking is that the money spent in freight can be leveraged for increased profitability. Many companies unknowingly have a completely inconsistent system for billing freight charges. What they should do is bill their customer for the retail freight and keep the discount for themselves. If they have a carrier provided system from UPS or RPS (FedEx Ground) then this is what they are doing, because those are the freight charges their systems print on the audit labels. But, if at the same time, they have a carrier provided system from Airborne or FedEx, then they are billing the discounted freight charges and the freight is just a pass through item. And if they have a system from both carriers, they are doing it both ways, thus, inconsistently. The problem here is that they are probably losing money in their shipping department because they are stuck paying all the chargeback items on their bills for incorrect addresses or surcharges for residential shipments. My suggestion moves the savings right to the bottom line! This is also true for the next three areas I will discuss.

If your company is utilizing a particular carrier's insurance, you are probably paying too much. Most of the carriers provide the first \$100 of insurance for a package free. If a package is worth over \$100 and is damaged (unless the shipper "declared its value" in the

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shipping system, it is not covered). If you want appropriate coverage you are forced to pay extra. UPS charges \$.35 per \$100 for declared value after the first \$100. This is why it is important to know how many packages you “insure” a day and what the average per package value is. Let’s say in our example that you insure 10% of your packages, or 20 packages a day, and each has an average value of \$900. You would be paying 8 x \$.35 (remember the first \$100 is free) or \$2.80 per package. Multiplied by 20 per day, the total is \$56 a day or \$1,232 a month. You could use an alternate insurance company and get the same coverage for only \$493 a month, saving \$739 a month. Or if you rarely have claims, you could self-insure and save the entire \$1,232. We would program your shipping system to calculate the insurance using UPS rates, bill the customer for that amount, and you add the whole \$1,232 a month or \$14,784 per year to your bottom-line (less any losses). This is explained further in Chapter 15, *Alternate Insurance Programs: An Important Marker on the Low Cost Shipping Road*.

Does your company ever ship multiple orders to customers in the same day? If these are shipments going to the same address, then you potentially qualify for consolidation discounts that could save up to 40%. The carriers rate packages by weight, zip code, and service level. They offer discounts if the shipper is sending multiple packages to the same address that total over 100 pounds for air shipments and 200 pounds for ground shipments. It costs *them* less because they can deliver the packages with just one stop for their driver. But if one shipment is being processed in the morning and the other in the afternoon, it would be nearly impossible for a shipper to remember and group these packages together for the consolidated discount. And, if yours is an organization with multiple workstations that are not networked (like those provided by most of the carriers), there is virtually no way of calculating or determining these savings. Let’s say that two orders consisting of 10 packages each could qualify for this discount. The average savings would be about \$40 per order, multiplied by two orders a day (\$80 a day). This comes to \$1,760 a month or \$21,120 a year! Chapter 13, *Save 40% on Delivery Costs*, gives a further explanation.

Did you know that all the carriers, except the post office, *absolutely positively guarantee* that their packages will arrive by the time they promise or the shipping is free? They do a pretty good job of delivering packages overall; the problem is, when they don’t keep their promise, they don’t automatically give the money back. You have to catch them and then file a claim. According to Consumer Reports, UPS is typically late about 20% of the time with their ground shipments and 10% with their air shipments. Let’s just say in our example that 10% of your 200 packages shipped per day are late. That would be 20 packages at \$10 each or \$200 a day, totaling \$4,400 a month. My company has developed a patent pending technology that automatically obtains that money for clients on a contingency basis of 50% of the actual monetary savings. In this case, the company would save \$2,200 a month or \$26,400 per year. Again, this money goes directly to your bottom line.

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How about another idea for increasing revenue through the shipping department? Companies frequently justify the investment in a computerized shipping system by simply adding a handling charge to the shipping cost and passing the investment in technology directly to the customer. At just \$1 per package, this would increase revenue by \$200 a day, \$4,400 a month or \$52,800 a year. That is more than enough to pay for the investment in a computerized shipping system. Chapter 14, *Shipping Department: Cost or Profit Center*, provides some variations on this subject. The next three points will show how a computerized shipping system can reduce costs in other areas of the company.

Now let's look at how a computerized shipping system can eliminate the cost of some of your shipping forms. What is your company placing on the box or package? What paperwork is being used to process a shipment? We still see companies utilizing preprinted forms with shipping labels embedded in them. At one site, the company was paying \$.25 each for these forms. At 200 packages a day, this comes to \$50 a day or \$1,100 a month (\$13,200 per year). How much do those plastic envelopes cost that say, "packing list enclosed"? Our new, patent pending Tuck label replaces the packing list, the envelope, and the current label and ribbon. Calculate the present costs vs. the cost of the proposed Tuck label and ribbons. You can see an example in Chapter 3, *Error-Free Shipping Labels*.

Sometimes we can save a company money by eliminating the cost to mail an invoice. Typically, the last piece of data that a company needs in order to invoice a customer is the cost of the freight. Because a computerized shipping system automatically calculates what that cost is and our system is interfaced with the accounting system, we can electronically send that data to your accounting system and trigger the process for invoicing in real time. The accounting system can then print the invoice right there at the shipping station and you can insert it in the package. At 200 packages a day x \$.33, you would save \$66 a day or \$1,452 a month (\$17,424 per year). This, too, goes right to the bottom line.

Sticking to the topic of invoicing, our technology can also increase cash flow. As we have discussed, most of the time invoices don't go in the mail until the accounting department enters the freight charges. Typically, this does not happen until the day after the packages are shipped. With the computerized shipping system solution, you can send the invoices out an average of 1 day sooner. According to *Inc* magazine, the formula for calculating cash flow savings is gross annual sales x annual interest rate x days saved divided by 365. You will need to know your company's annual revenue to calculate the exact amount, but for the sake of this example, let us assume your company is doing \$50 million dollars a year. The annual savings in this case would come to \$12,000.

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Let's review another two areas where labor savings can be realized. One of the greatest benefits of technology is that we can utilize it to eliminate time-consuming manual tasks that are also prone to errors. We discussed earlier how technology can eliminate the typing of redundant data. Here I am suggesting that you look for any and all manual processes in the shipping department. Many times you will find that you are hand writing bills of lading, COD tags, or carrier airbills. Perhaps you are keeping a logbook of every package shipped for reporting purposes. Possibly you are even handwriting data on each work order. By observing the shipping process, you will undoubtedly find a manual process that we can automate and save you money on. In our example, let's assume that you are spending an hour a day on a particular manual process. At an average warehouse labor rate of \$20 per hour, we come to \$440 a month or \$5,280 a year that could, most likely, be eliminated.

Another area where we can reduce labor costs is customer service. Find out how many times you receive inquiries about the status of shipments. How much time do you spend researching such inquiries? Let's say that 10% of your packages trigger a phone call and you get 20 per day. If you spend 10 minutes on each one, you are spending 200 minutes x 22 workdays or 4400 minutes/60, which comes to 73 hours a month. At \$20/hr that equals \$1,460 a month or \$17,520 a year. Chapter 11, *Leveraging Your Shipping Operation for Superior Customer Service and Profits*, explains this further.

Finally, we not only incur labor costs when answering customer inquiries; there is also the cost of the phone call. Chances are that you have a 1-800 number which costs about \$.10 a minute. At 4400 minutes a month (see above), the phone bill comes to \$440 or \$5,280 a year.

We've discussed 14 different ways that a computerized shipping system can provide a return on investment. In our sample case study, the total savings for your company would add up to close to a half a million dollars a year (\$394,341.00). Of course, not every company will be able to gain savings in all of these areas; however, with a little research on your part and the guidance of a knowledgeable consultant, I am confident that you will find enough return to justify the investment for your company.

Mark Taylor is the nation's authority on computerized shipping systems with 25 years of experience consulting more than 10,000 organizations, including Standard Register, General Electric, and Unisys. He is the CEO of TAYLOR Systems Engineering Corporation in Plymouth, Michigan and the leading consumer advocate for shippers nationwide. He is the developer of www.shippingrefunds.com and can be contacted at 734.420-SHIP or mtaylor@shippingsys.com.

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