

How to Cost-Justify Mobility Technology Investments in Route Accounting Organizations



A ZEBRA BLACK&WHITE PAPER





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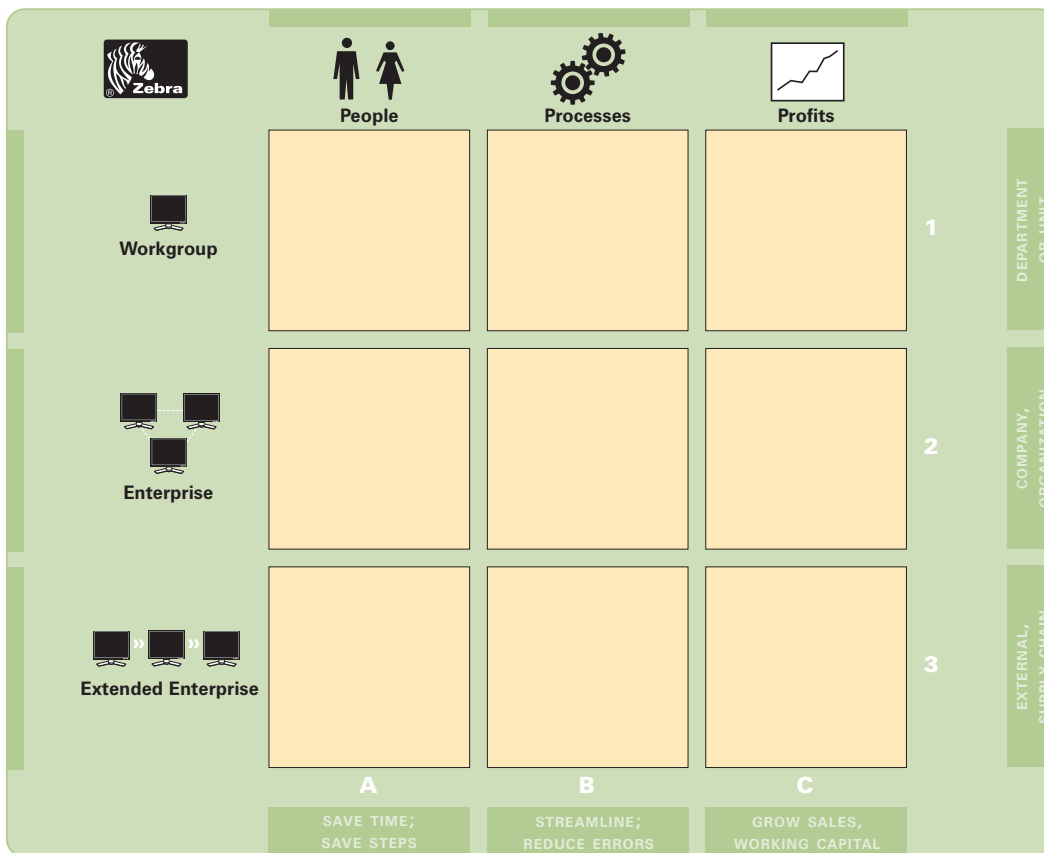



Companies of all kinds and sizes are realizing the benefits that mobility technology can bring. The impact is especially strong for route accounting organizations, where mobile workers frequently interact with customers. The benefits that can be realized by implementing mobile technology are the keys to justifying the initial cost of the system. Some benefits are easily quantifiable, while others are much softer and more difficult to recognize. These benefits must often be quantified and included in a return on investment (ROI) analysis for financial justification of the mobility project.

To help identify, classify, and categorize the benefits and impact of route automation across your organization, Zebra has developed the Zebra Business Value Map. This value map also helps illustrate how automation changes in one area affect others. The map is a grid that relates how mobile computing and printing applications used on routes impact people, processes and profits at various levels of the organization. To make the Zebra Business Value Map relevant to your specific operations, answer a set of sample questions that will help identify areas for improvement and frame your mobile automation needs.

The Zebra Business Value Map

The Zebra Business Value Map consists of a 3 x 3 grid. Each element of the grid can be used to identify the potential benefits and value that route automation brings to that portion of the organization. The definition and examples for each element of the grid is illustrated below on the far right and bottom of the illustration.





Getting Started: Questions to Consider

The responses to questions that you develop about the benefits automating the route accounting process within your company can be used to populate the Business Value Map. This will provide a clearer picture of the benefits and possible elements of the ROI model to assist in justification of the project.

To get you started, here are some example questions that you may want to consider to help assess the need and value for route accounting automation:

- How much time do drivers spend preparing orders and invoices?
- Do you take advantage of DEX to cut driver check-in times?
- What happens in the office when handwritten orders or invoices aren't legible?
- How much time is spent on data entry, both in the field and in the office?
- Do inaccurate orders cause problems with customers?
- How often do customers call about billing disputes?
- How long does it typically take to resolve these disputes? Which departments are involved?
- Could you benefit if route drivers had more time available for merchandising and sales?
- Do you always have the documentation needed to settle invoice, return and credit disputes?
- What percentage of time do drivers and office staff spend handling exceptions?
- How do your out-of-stock rates compare with industry averages (7.4 percent for the top 25 categories)?
- Would operations benefit if your route drivers could make a few more stops per day?
- How do your customers rate your customer service?
- What are the costs of pre-printed forms used in route accounting?

The following sections explain and provide examples of how route automation impacts the areas outlined on the Business Value Map.

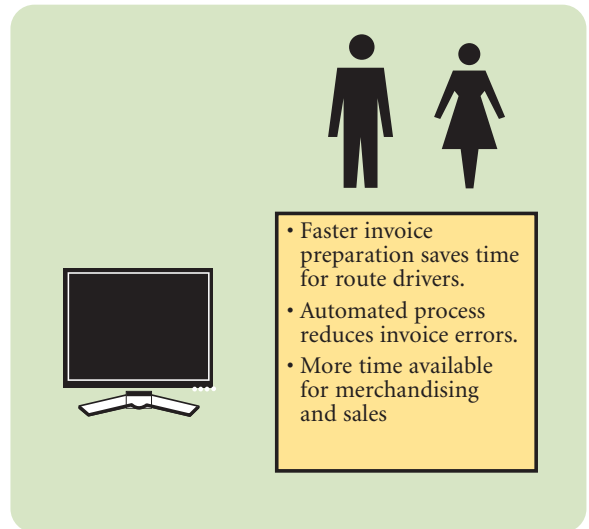
The Business Value Map in Action

To see how the Business Value Map works, we'll answer some of the sample questions and summarize the "typical" benefits that are achieved by Zebra route automation customers. Automated solutions for route operations usually include handheld computers running appropriate application software, mobile printers and possibly wireless network connectivity. We'll start by outlining how mobile workers use these solutions, using invoice preparation as an example. For route accounting organizations, the route workers or route sales representative fall within the workgroup level of the grid, which is the starting point on the matrix.

Workgroup – People

The most consistent benefits from route automation are time savings and improved productivity. Handheld computing and mobile printing applications slash the time required for invoice and order preparation. Several of the questions were designed to develop an appreciation for how much time is spent on these activities on the route and in the office. Organizations are often surprised to learn how much route paperwork influences other operations. When organizations begin to question and measure their paperwork-related activities, the value of route automation often becomes clear.

In a non-automated environment, invoices are typically created by handwriting on three-part forms. Notes or special instructions may be crammed in the margins or written on a separate paper, which may be lost or separated from the actual invoice. Completing invoices on a mobile computer instead of on manual forms saves time because software can automatically populate customer information and other fields, and drop-down menus simplify other activity. So people at the workgroup level get the benefit of improved productivity. Automating the pre-call process with application software also saves time, as does using route planning software to schedule daily activities.

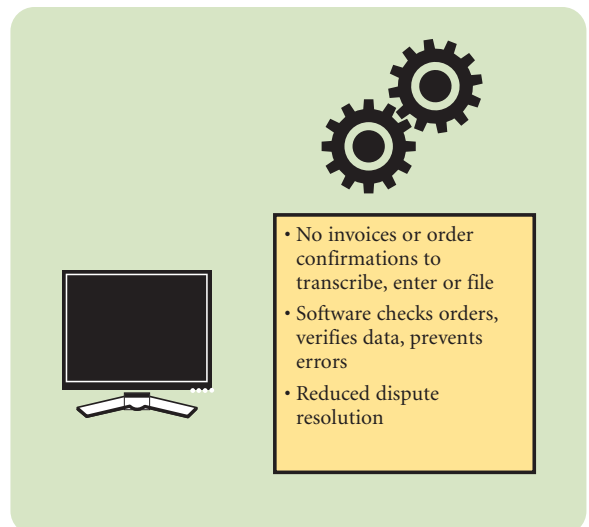
An illustration on a light green background. On the left is a black computer monitor on a stand. To its right are two black silhouettes of a man and a woman. Further right is a yellow box with a black border containing a bulleted list of benefits.

- Faster invoice preparation saves time for route drivers.
- Automated process reduces invoice errors.
- More time available for merchandising and sales

Workgroup – Processes

The manual process provides no strong safeguard against errors, and poor handwriting and low-quality carbon forms increase the chances of inaccuracies. Answers to the questions about inquiries, disputes and customer service can indicate if data accuracy causes problems.

Improved accuracy is a major benefit of automating the process. Using a handheld computer application with preloaded, pre-verified customer information and SKUs prevents errors. Most software applications require users to verify data if they attempt to enter questionable quantities, prices, SKUs or other information.

An illustration on a light green background. On the left is a black computer monitor on a stand. To its right are two interlocking black gears. Further right is a yellow box with a black border containing a bulleted list of benefits.

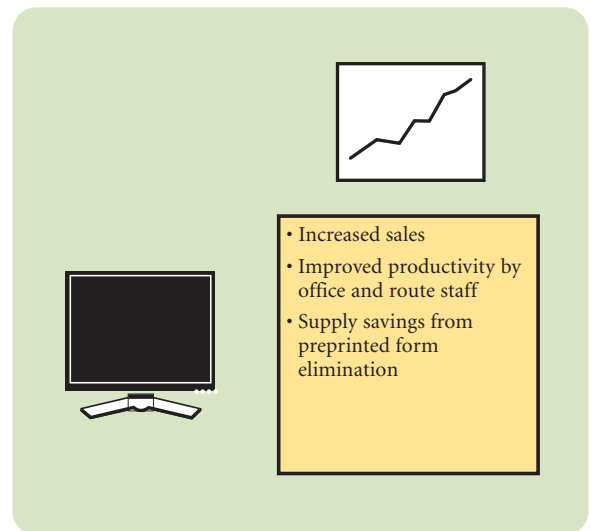
- No invoices or order confirmations to transcribe, enter or file
- Software checks orders, verifies data, prevents errors
- Reduced dispute resolution

Changing processes to produce invoices, order confirmations and other documentation on demand instead of preprinting at the start of the day saves time, and improves accuracy because changes can be reflected in the printout. Thermal printers enable other process improvements. Users have the option of mounting them in the vehicle or choosing wearable or handheld models that save time by eliminating the trip to the vehicle to generate the invoice.

Well-developed software applications also give route workers the ability to handle exceptions and disputes in the field, which saves time for office staff and helps satisfy customers more quickly.

Workgroup – Profits

The productivity and process improvements mobile workers get from handheld computing applications translate into more profitable route operations. Mobile automation projects consistently reduce operating expenses. They also hold strong potential to help increase revenues. Improved productivity is the key. For example, between 2.1 percent and 6.0 percent of the time route drivers spend in retail stores is devoted to preparing invoices, according to a study by the Grocery Manufacturers of America (GMA). The time may not seem significant, but the difference is – some drivers spend almost three times as much time on invoice preparation as others. Workers at the lower end of the range can spend more time on merchandising, sales and other activities that can strengthen relationships with customers and ultimately grow revenues.



With automation, route professionals can complete more stops per day, which improves inventory turns, return on assets, and cash flow. Making just a few more stops per day, per route also enables businesses to expand routes and grow their customer base without adding personnel. There is a parallel benefit in the office, where additional billing clerks, customer service representatives and other support staff don't need to be added to support expanded operations because automated mobile systems are highly scalable.

There are also more immediate and quantifiable profit improvements. Simply replacing traditional invoices and other forms with less expensive thermal printer paper reduces operating costs. One Zebra customer performed an analysis to compare the costs of legacy 8.5-by-11-inch invoices used in its field operations with a 4-by-6-inch invoice produced on a Zebra mobile thermal printer. The thermal media cost was measured at 2.7¢ per invoice, compared to 6¢ for full sheets used in inkjet or impact printers – making the thermal media 45 percent less expensive. Switching from full, plain-paper sheets to 4-by-6 thermal receipts would produce savings of \$330 per 1,000 invoices produced. Companies that use multi-part forms could save even more. Thermal printers also use no ribbons, which can represent another supply savings for companies who use matrix printers.

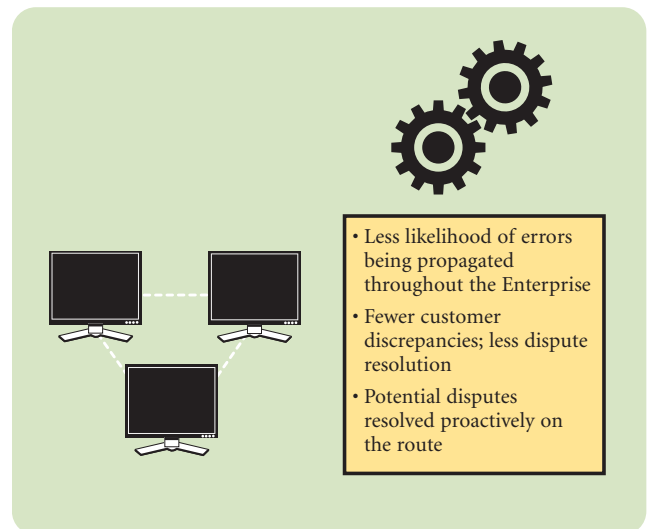
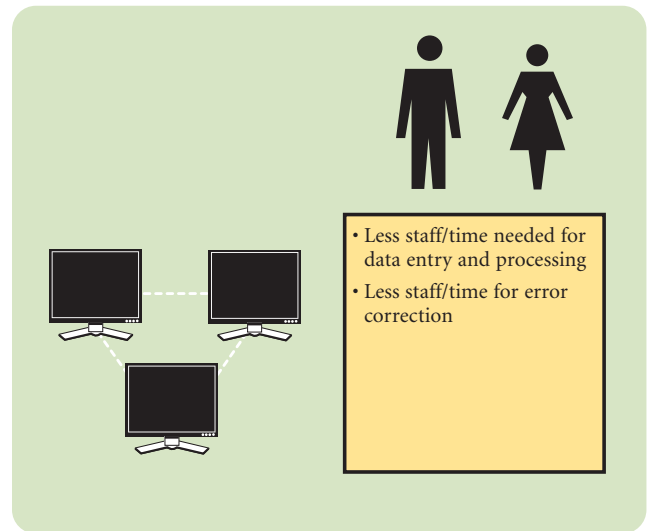
Enterprise – People

Within route accounting organizations, enterprise-level staff includes dispatchers, billing clerks, customer service representatives, inventory managers, warehouse workers and other personnel who work with or support route representatives. These people don't actually use the mobile computers and printers used in the field, but still benefit from route automation.

At the enterprise level, the main benefit of mobile technology is the reduction of labor needed for data entry and processing. Invoice data that is recorded on mobile computers in the field can be uploaded automatically to update billing and inventory systems. There is no manual labor required to decipher handwritten invoices and notes, enter them into the appropriate systems, and file the original paperwork. Eliminating these tasks also reduces the opportunity to introduce errors.

Enterprise – Processes

Error reduction leads to more labor-saving and process-improvement benefits. The average discrepancy rates for route invoices are 10.5 percent for small-format retailers and 15.4 percent for grocery stores and other large-format retailers, according to a recent GMA report. The GMA calculated a 250-store small-format chain must reconcile 27,000 invoices per year, and a 250-store large-format chain would have 450,000. If invoices take only 15 minutes to research and reconcile, the small-format chain would spend 6,750 hours annually on invoice reconciliation (approximately 3.4 full-time equivalent positions). Typical large-format retailers would need approximately 56 full-time equivalent employees for invoice resolution. Mobile automation also gives route workers the ability to resolve errors in the field, which further lightens the workload for office staff.



Enterprise – Profits

Reducing labor for non-value-added paperwork processing can clearly help profitability. Other impacts of process automation also help profits, but are not as clear. Potential cash-cycle improvements and revenue growth should not be overlooked when considering the value of route automation.

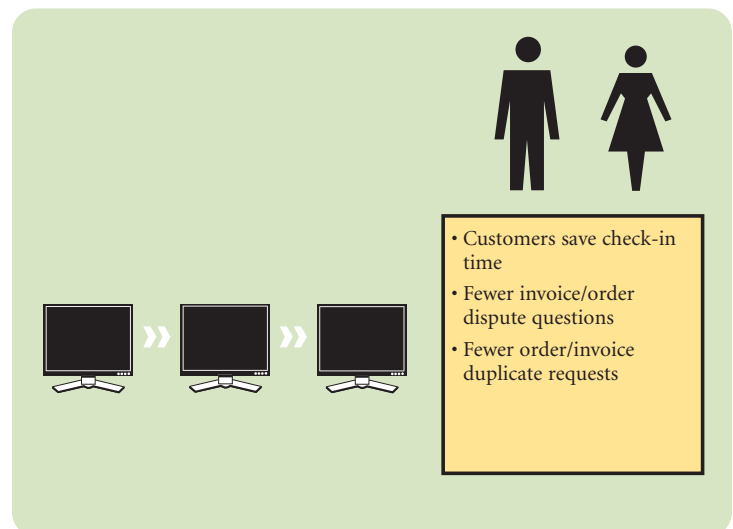
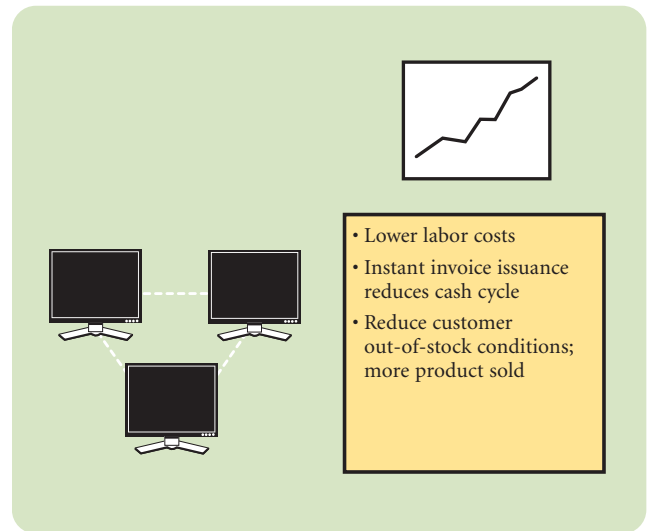
When invoice and inventory information is recorded on a handheld computer, there is typically no lag time for recording it in the enterprise information systems. Companies with manual, paper-based operations typically can't issue invoices for several days after goods are delivered. As a result, they operate on a billing- and cash-cycle disadvantage compared to companies with automated operations. Reducing information lag times also improves inventory accuracy, which can reduce out-of-stocks and the associated lost revenue.

Customers appreciate in-stock products, accurate invoices and efficient replenishment, so mobile automation plays a part in building customer satisfaction. Earning customer confidence can ultimately win more shelf space and business.

Extended Enterprise – People

Processes that make things easier for route personnel also tend to make things easier for their customers. For example, if orders are complete and accurate, customers are spared from rechecking inventory and placing rush orders to cover for shortfalls (and from having to prepare over-shipments for return). If orders are consistently accurate, customers may save labor by cutting down the time they spend checking incoming orders. A GMA study found automated check-in processes for route drivers can reduce receiving time by 60 percent, which benefits the driver and customer alike.

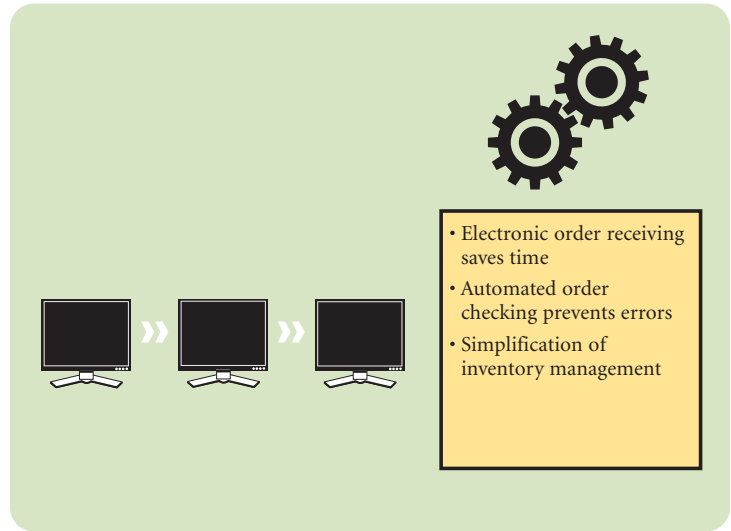
Customers also benefit by receiving legible paperwork from route drivers. The consistent print quality from thermal printers creates quality invoices, receipts, orders and other forms that customers can easily process, and will remain legible after being processed and filed. The result is fewer questions that take time and effort to resolve.



Extended Enterprise – Processes

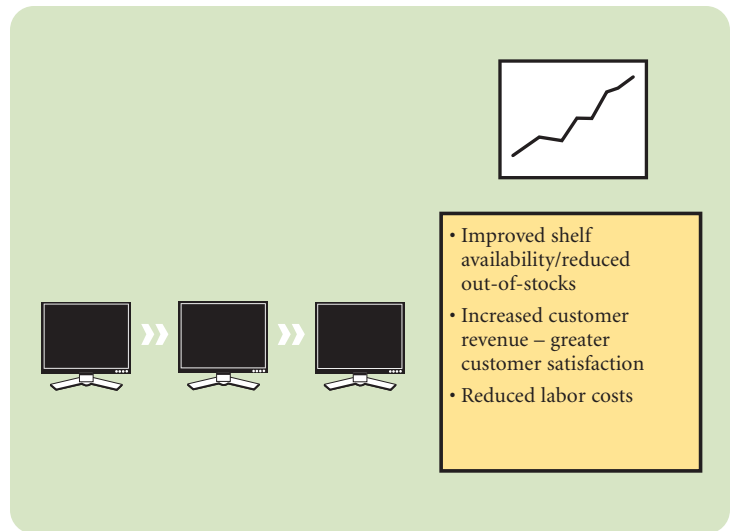
Customers can put electronic processes in place to take advantage of handheld computers used by delivery drivers. The DEX system is an excellent example. DEX helps cut receiving time and provides many back-office benefits for invoice and data processing. The GMA's NAXML pilot study for small-format stores found that a manually entered invoice at store-level takes 5 minutes to enter versus 30 seconds for an electronically transmitted invoice.

Many handheld computing applications for route accounting have features to ensure orders are delivered accurately, which also helps customer benefits. Validating delivery saves time during the receiving and auditing processes, and promotes inventory accuracy, which in turn simplifies inventory management and reduces the need for exception management.



Extended Enterprise – Profits

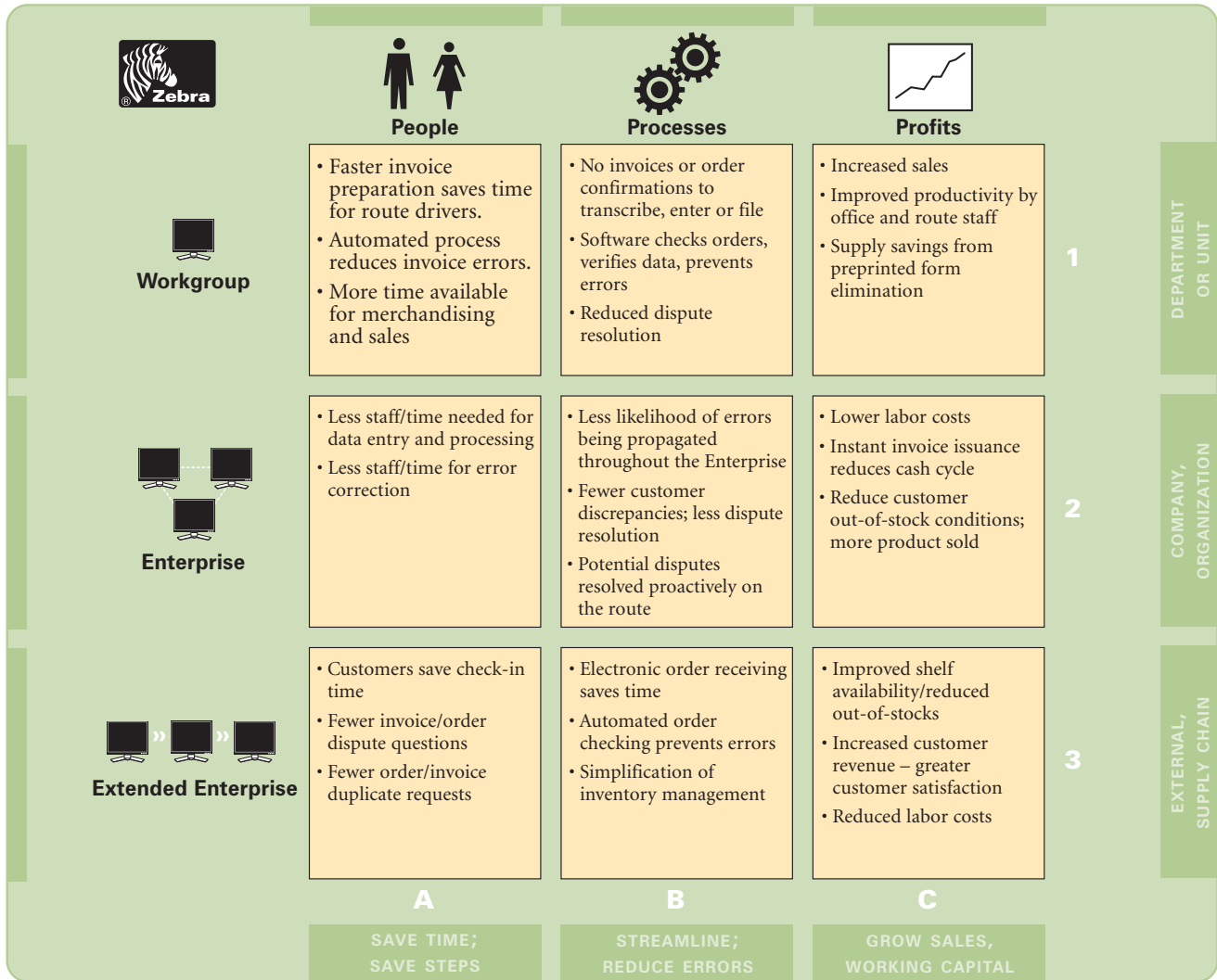
Inventory accuracy almost always improves when route and delivery operations are automated. Reduced out-of-stocks usually follow, which allows customers to profit from your route automation efforts. Supermarkets alone risk losing \$6 billion in annual sales from out-of-stock DSD products, according to a GMA study, which also found out-of-stocks for the top 25 DSD product categories average 7.4 percent. For promotional items, the out-of-stock rate climbs to 13.1 percent. The study concluded that the average supermarket can increase annual revenue by 2.9 percent or \$75,000 by reducing out-of-stocks.



Customer profitability is also helped by supplier processes that save time. Recall the GMA data that found DSD personnel spend between 2.1 and 6.0 percent of their time preparing invoices. The same study found efficient DSD operations require 7.2 fewer minutes at the back door, 4.2 fewer minutes to process credit returns, 3.0 fewer minutes for check-in verification, and similar time savings for other processes. These figures can be hard to develop on a customer-by-customer basis, but customers should know intuitively that efficient suppliers with highly professional route personnel are good to do business with.

Summary

The final value map has all elements for the grid complete with benefits. This can now be used to help create the financial justification for the mobility project.



To see the true value of route automation, businesses need to look beyond the route, which the Zebra Business Value map in conjunction with the sample questions provided in this guide will help you do. Mobile computing and printing applications to support route accounting influences processes and people throughout the company and its trading partners. Adopters of route automation technology often report unexpected side benefits and faster-than-expected return on investment (ROI).

The Zebra Business Value Map helps identify the full impact of automation and its ROI potential. Working with the map also helps businesses see their project opportunities and requirements more clearly. More information about route accounting applications, benefits, customer examples and mobile technology is available at Zebra's Web site, www.zebra.com. Browse the Industry Solutions section to access free white papers, case studies, ROI calculators, product information and other resources.



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