



Honeywell

Automating Transportation and Logistics

How automation and assessment programs are helping T&L companies cut costs, increase cash, and improve customer experience

Editor

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Barcoding, Inc. is a systems integrator specializing in the development, deployment, and management of enterprise-wide solutions that drive efficiency, accuracy, and connectivity.

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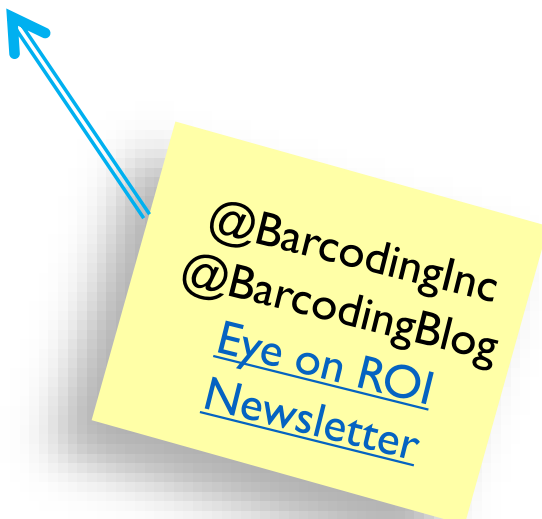


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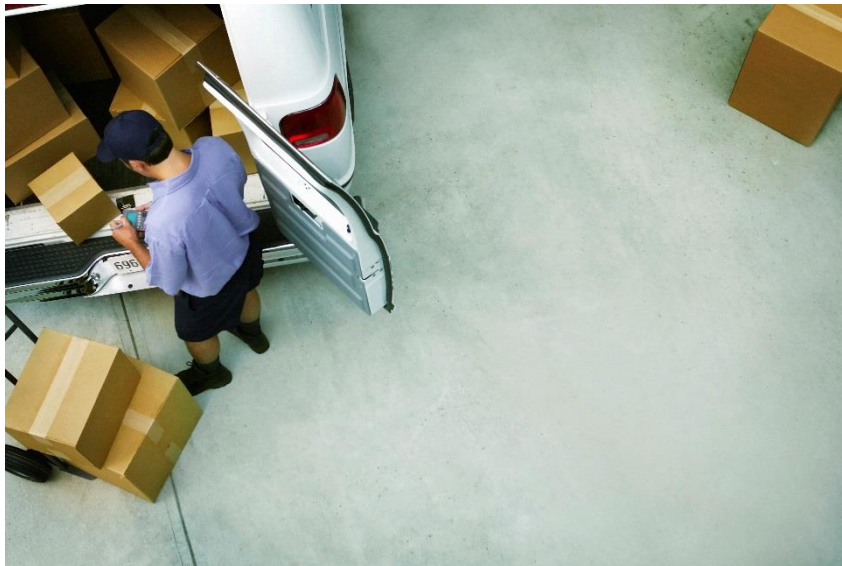
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Chapter I

Logistics Under Pressure



Nearly all transportation and distribution companies in a market pay similar fuel prices, share the same roads, and are governed by similar laws. So why are some far more successful?

Winning T&L companies don't rely on cyclical business conditions: They can profit in any conditions due to differentiation in either services or underlying processes.



The Expansion of Logistics

In its infancy, logistics involved getting one item from village A to village B. Now, logistics comprises getting thousands of shipments across countries and continents to single, multiple, and now thousands of end-point destinations. The timing for these delivery services, however, have not necessarily scaled.

The growing demand for same-day deliveries is putting pressure on T&L operations to not only meet these tight timelines, but also to continue to offer a consistent level of customer service (while at the same time improving operational efficiency and reducing costs).

Compared to a pick-up, the delivery of a shipment is a slightly quicker process taking on average 8 minutes 11 seconds. 29.5 percent of that time, or an average of 2 minutes 25 seconds could still be saved through automation¹.

Areas most in need of improvement in the delivery process are:

- an increase in the amount of information and detail,
- the time taken to process delivery information,
- improved access of information in back office systems,
- improved accuracy of information.

Taking a Fresh Look at Operations

T&L companies are winning customers and improving profitability by taking a fresh look at their operations.

By examining basic functions like how pickups are made, how addresses are entered, and how deliveries are completed, companies have imagined new services and business processes that are setting them apart in their markets. Often, the new approaches have led to new business.

Some of the most effective new processes being used in the transportation & logistics industry today make innovative use of proven technologies like **mobile computing, imaging, GPS** and other **wireless communication** to create sustainable business benefits. Innovating by introducing document scanning and processing capabilities to the mobile environment creates more opportunities to eliminate paperwork and to cut errors and cost out of operations.

Effective innovation does not require taking risks on unproven technology. Implementing new technology itself without process changes is often a waste.

Where Top Companies Focus

Operational Efficiency

Managers are seeking to improve operational efficiency by gaining back mere seconds from each workflow to improve the overall time and cost savings. Having workers take fewer steps over the course of a day, eliminating battery changes mid-shift, or using one device for multiple purposes are all key components to increase efficiency. It is clear that technology investments will impact productivity when deployed effectively.

Picking Accuracy

Picking accuracy is of growing importance to managers as visibility increases over the cost to the business through measures such as The Perfect Order Index. Mispicks are an ongoing issue within the workplace, and one that could be avoided through new technology and processes.

Reverse Logistics

Trends such as 'reverse logistics' are growing in popularity as businesses look to manage returned goods within the supply chain. Along with this, managers are adopting 'Hardware as a Service' models to ease the burden of peak periods without significant capital expenditure. Adoption of RFID and Voice technology is steadily growing, with the US and Germany leading in both instances.

Survey Says... Key Findings¹

A 2013 Honeywell research survey conducted among transport and logistics managers worldwide found the following:

- 44% of operations in T&L believe reviewing current workflows and technologies (**transportation assessments**) is the most effective means of **achieving efficiency**.
- A key to improving operations is the **deployment of mobile, location-based technology**, an area where managers believe savings of more than \$282,000 can be achieved in the next 12 months.
- Almost a quarter (23%) of the companies have yet to deploy location-based technology, citing a **number of barriers** including **lack of need and cost**, preventing them from capitalizing on these benefits.
- Managers see **broadband mobile communications** such as 4G and LTE as the **single biggest future driver of ROI** (60%) followed by integrated vehicle telematics (44%) and RFID (38%).

Chapter 2

Current Opportunities for Growth



How does a combination of mobile technology implementations for mobile workers and transportation assessment programs elevate operations to the next level?

Now is the time to answer this question. T&L operators need to refresh their operations. Innovation using mobile technology can be tactical and provide a rapid return on investment, as the following examples highlight.



Innovation with Proven Technology

By focusing on process improvements, transportation companies around the world have innovated by taking advantage of low-risk, affordable and proven technologies like wireless communication, digital imaging, and electronic signature capture. While these tools may not seem cutting-edge, they can cut substantial amounts of time, errors and cost out of T&L operations.

T&L operators have more proven building blocks to work with than ever before. These include:

- Reliable mobile computers in a variety of configurations,
- Wireless options that can provide real-time connectivity to dispatch,
- Order management, inventory, and other applications to help serve customers,
- Convenient options for capturing electronic signatures and scanning and processing documents in the field,
- Multiple automated data capture options including bar code scanning, optical character recognition (OCR), and RFID
- Software integration tools and experienced solution providers (like Barcoding, Inc.)

Let's look at a few examples now.

Keeping on Track with GPS

One key to improving operations is the deployment of mobile, location-based technology. For this reason GPS is currently – and will continue to be – **an important area of investment for T&L operations.**

In many cases, T&L operators can provide in-transit visibility to customers by leveraging the location data they already receive from in-vehicle GPS devices and sharing it with customers. This level of tracking and reporting used to be associated with large international parcel couriers, but is now available to companies of all sizes. GPS is finding its way into even small fleets, because it is very affordable and typically pays for itself in a few months by leading to fuel and time savings.

There are several ways to use existing GPS capabilities to improve operations and offer new services. Many companies that began using GPS for navigation assistance later expanded into using the collected data to analyze performance and optimize routes. Some went further and used GPS data to drive dynamic rerouting (especially on high-volume, multi-stop routes), either by helping a dispatcher to make decisions or by feeding data to an automated routing and scheduling system.

Cutting Paper Cuts Costs

A Turkish letter and package delivery company (Aras) did not need cutting-edge technology to cut a substantial amount of time and cost from its operations.

The company switched from recording deliveries by paper to recording them on handheld computers. For pickups, drivers scan a bar code on the package instead of entering the details on a form. For Aras, the process and technology changes reduced the time drivers took to record a delivery by an average of 116 seconds. Drivers average 60 transactions per day, so the handheld computers produced approximately 2 hours in daily time savings – enough time to complete additional deliveries during a shift.

Aras estimated that replacing manual data entry with computer entry and bar code scanning prevents 150 data entry errors per day. The company experienced a 30 percent reduction in customer service calls, which it attributes to fewer errors. The system paid for itself within a year, and provided a 3-year return on investment of 185 percent, while also enabling more productivity and higher customer service levels.

Proof of Delivery Example

Noble, a Canadian wholesale supplier that operates a fleet of 200 trucks and 53 branch locations, provides another example of how innovating processes with common tools can create strong business value.

THEN: Scanning confirmation slips took about 10 minutes at each branch, for a total of approximately 8 hours each night and a similar amount of time was spent retrieving POD information to prepare invoices. Customer Service reps spent approximately 4 hours on the phone each day answering customer calls, most about delivery status. Not having POD documentation for 20 percent of deliveries made it difficult to resolve some customer service issues.

NOW: The company deployed handheld computers to its drivers to automate the delivery and confirmation processes. The handhelds have two basic applications: delivery instruction and electronic POD.

Customers now sign for the order on the computer screen instead of on paper, and the transaction is **instantly reported** to Noble's customer service system over a wireless network.

Imaging Adds Documentation, Reduces Paperwork Processing Time

The innovation of integrating a camera into mobile computers has led to many process innovations in how deliveries are documented and billed.

One of the simplest and most effective is to use the computer to capture a document image, including the POD signature that proves goods were delivered. Some organizations are doing much more, by using the handheld computer as a document scanner so bill of lading documents, manifests, invoices, and other forms can be captured, processed, and communicated in real time.

Integrated imaging in T&L operations is beneficial in several ways, particularly for revenue assurance.

- Prevent disputes
- Ensure payment with visual documentation
- Provide indexing capability
- Improve home delivery (prove where delivery was left)

READ [Imaging Adds Visibility to Transportation](#) to learn more about mobile document imaging (eMDI) in transportation operations.

Advanced Document Imaging

Mobile imagers give workers a fast and reliable way to convert paper documents into electronic forms.

Start various processes (route planning, order picking, invoicing, answering customer service inquiries, etc.) **hours or even days earlier** with imaging integrated with mobile tech. Transmitting document images wirelessly not only gives office workers a head start, but it also saves considerable data entry time and prevents manual data entry errors.

One of the most beneficial uses of mobile document imaging in the transportation industry is to capture bills of lading and manifests upon receipt by the driver, and then send the electronic image to headquarters for processing.

Several major benefits:

1. Provides critical information needed for downstream planning and optimization.
2. Shortens the billing cycle
3. Improves accuracy by using electronic records instead of paper

Shipment Address Validation

Drivers can use a handheld computer with enhanced imager to scan the shipping labels of the shipments they are picking up. Image processing software can then extract the address data, validate the information, and populate the required records, and could direct a mobile printer to generate a bar code shipping label for the item.

By innovating the process to validate the address in the field and record it in real-time, some organizations have reduced their shipping errors, improved billing accuracy, and reduced dwell time for their consignments.

Using the imager and software to capture and communicate address information saves time for drivers and prevents manual data entry errors. Addresses can also be validated against a database to add additional data such as the delivery address type (commercial, residential or rural), notes, special delivery instructions or other details that enrich the process.

- Prevent data entry errors
- Ensure billing is correct
- Cut time from the transportation process

Future-Thinking: Technology Trends on the Horizon

Data Connectivity:

Improved mobile data connectivity offers the biggest potential opportunity for T&L operations, with data communications providing the most promising return on investment.

Broadband mobile communications (4G/LTE/LTE Advanced/WiMax/etc) were chosen as the most significant opportunity for ROI by 60 percent, and integrated vehicle telematics by 44 percent¹.

Two-Way Communication:

Customers demand real-time updates through convenient communication channels.

Organizations need to recognize and capitalize on multiple two-way communication channels with their customers, not just a means of placing orders, but as a method of communicating valued information with the company's entire audience.

Chapter 3

Customer Experience



The need for T&L operations to deliver on time and accurately is as much a strategic issue as it is a demand from customers.

Over three-quarters of companies rank complying with SLAs, making deliveries and collections on time, and accuracy of service as some of the biggest areas of business pressure¹.



The Demand for Express

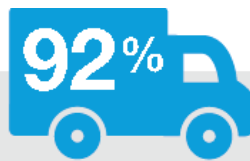
Disruptive innovation has created new market opportunities for T&L providers. Consider the disruptive effect that e-commerce had on the home delivery market.

Most customers expect to find what they want, order it when they want, and have it delivered where/when they want. They also want to be able to track their order and shipment every step of the way. Not long ago companies offered customers self-service shipment tracking as a differentiating feature. Now it is a requirement to meet most customer service expectations.

Expectations for faster delivery and more visibility have extended to business-to-business customers.

77%

Of organizations say their customers now demand same-day delivery services



of transportation & logistics managers struggle to meet same-day delivery requirements

Back-office Automation Gains

Almost half (48%) of operations estimate they receive more than 300 calls per day from customers asking for order status updates, though they believe that more than 20 percent of these calls could be eliminated by having automated proactive shipment status updates¹.

The ability to grow better customer service, while at the same time driving further efficiency, is core if T&L operations wish to place themselves competitively.

This demonstrates that the efficiency gains from mobile technology and automation could extend to back-office staff as well.

By providing proactive shipment updates, a process enabled by location-based and mobile technologies, these same companies believe they could eliminate 24 percent of these calls immediately. This equates to 72 calls per working day, a time saving that could then be used to better serve a wider range of customers.

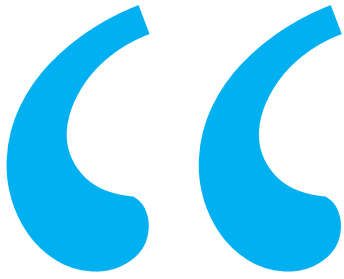
Customer Service Equals Profitability

An unwillingness to deploy mobile technology and undergo transportation assessment efforts could be affecting customer service – and more importantly, organizations' profitability.



According to the Honeywell study¹, these same T&L operations could be saving on average over \$459,000 per annum as a result of process improvements and the implementation of mobile technology across workflows. Yet despite that, 60 percent of the organizations still use paper-based systems to complete tasks associated with pick-up and delivery.

Process improvements and implementation of workflow technology is not a one-off practice. Organizations need to understand the requirement for regular and ongoing process assessment efforts.



This system has allowed us to refocus approximately 15 full-time staff on bettering our customer service rather than spending time on data entry.”

Remember the [Noble Case Study](#)?

Because of Noble’s POD application, customers now sign for the order on the computer screen instead of on paper, and the transaction is instantly reported to Noble’s customer service system over a wireless network. This is an example of a automation having a huge impact on profitability and customer service.

“This has been great from a customer service perspective, because often people will call and not realize that someone from their company has already signed for their package; our representatives can now tell them exactly who signed for packages and at what time,” said Tod Querenqesser, project manager for Noble.

Chapter 4

Transportation Assessments



Process improvement is not merely about spotting where workflows can be made more efficient. For T&L operations in particular, it's about understanding how automation can reduce the human effort and intervention required, as well as decrease the number of 'man hours' necessary to carry out processes from start to end.

Not surprisingly, automation is generally delivered by adding technology. Speeding up highly repetitive workflow processes by just seconds and eliminating the opportunity for human error can have significant impact on overall operational efficiency and costs.



What is a Transportation Assessment?

An transportation assessment boils down to one simple thing: answering the question “How well are we doing?”

While it’s important to answer this question internally, there is an even greater opportunity for improvement with the assistance of an objective and professional supply chain expert.

Transportation Assessments from qualified consultants can identify and recommend improvements to your current procedures, systems, and strategy.

A qualified, objective supply chain expert should be able to provide you with the following:

- An unbiased and objective assessment of your current operations.
- Identification of “realistic” improvement potential supported by credible return-on-investment analysis.
- Identification of easy-to-implement opportunities that will more than pay for the analysis.
- A road map of operational improvement that will result in your continued success in the marketplace.
- Alternative transportation systems, methods, procedures, management tools, layouts, etc., that will provide excellent customer service at the lowest possible operating cost and investment.

Don't Miss Out: Improvement Opportunities

In our study¹, 7 percent of T&L companies have never undertaken a process assessment effort – entirely overlooking a multitude of opportunities to improve their operational efficiency and drive cost-savings.

Companies spend between 5% to 10% of their revenue on transportation – making this an area ripe with opportunity.

Look for a transportation assessment to **lower your costs, eliminate non-value activities, improve customer service, and use resources more efficiently.**

AREAS FOR REVIEW MAY INCLUDE:

Transportation spend: inbound/outbound

Delivery programs:

- Store schedules and sample requirements
- Route optimization
- Carrier selection and mode
- Carrier rate structure
- Trailer cube utilization
- Backhaul program
- Carrier performance
- Freight payment
- Transportation system support

Review Inbound Freight program:

- Inbound ship points - domestic/international
- Carriers utilized – Ocean/OTR
- Custom brokers
- Compliance
- Port of entry by vendor (If applicable)
- Containers utilized by vendors (20,40,45, 45 high cube) If applicable)
- Scheduling
- Import fees (If applicable)
- Ocean
- Inland
- Brokerage

REMEMBER,

Process Improvement is Necessary First

Effective innovation does not require taking risks on unproven technology.

Implementing new technology itself without process changes is often a waste.

Some of the most effective new processes being used in the transportation & logistics industry today make innovative use of proven technologies like mobile computing, imaging, GPS and other wireless communication to create sustainable business benefits.

Innovating by introducing document scanning and processing capabilities to the mobile environment creates more opportunities to eliminate paperwork and to cut errors and cost out of operations.

Be Efficient – Accurate – Connected™



Thank you for reading! Now take the next step...

If you need help putting together **your own transportation solution**, or **transportation assessment** – [contact Barcoding, Inc.](#) We are a trusted advisor to more than 2,500 companies across the country.



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Additional Reading and Sources

1. <http://www.honeywellaidc.com/en-GB/resources/Publications/Publications/delivering-on-tl-transportation-logistics-research-paper-A4.pdf>

2. <http://www.honeywellaidc.com/en-GB/resources/Publications/Publications/innovating-with-proven-technology-tl-white-paper-A4.pdf>