



The Paperless Delivery Process

10 Ways to Go Paperless (and Save Money) with Fleet Management and Supply Chain Optimization

Cadec Global

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“Over \$400,000 a Year from Paper!”

Cheney Brothers, a billion-dollar food distribution company in south Florida, is growing. The 80+ year old company delivers food products to restaurants, hotels, convenience stores, hospitals, schools and prisons across four states in the southeast. With more than 260 delivery trucks, Cheney Brothers chooses to manage its own private fleet to maximize customer service. Due to the high cost of operating a fleet, the company is continually looking for innovative ways to cut costs and improve productivity.



In reviewing its delivery operation, Cheney Brothers realized its staff was using many manual processes that were inefficient, time consuming and costly. There was one common trait across these areas—paper. Cheney Brothers was spending more than \$400,000 a year on paper and the labor and equipment associated with paper-based processes. In addition to driver paperwork and logs, three-ply forms for each delivery and paper-based invoices cost the company hundreds of thousands of dollars in paper, materials and the manual processes associated with it. Simply reducing the use of paper could dramatically reduce the company’s operational costs.

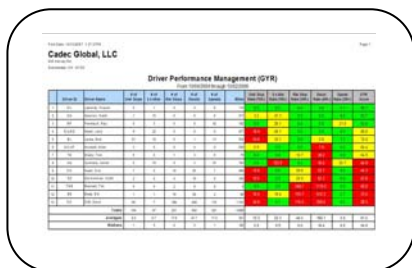


Going paperless is one of the most ambitious and most sought-after goals for businesses that own and operate a private delivery fleet. Going Green—the desire to be more environmentally responsible—is one of the driving factors behind going paperless. In addition, the move to reduce paper can also have a significant impact on an organization’s bottom line. Business processes that require paper are often manual processes that are time consuming and error prone, yet these manual processes remain common in the transportation industry.





This paper highlights the most common paper-based processes used by private fleets that can be automated by today's advanced fleet management technologies. We will explore how many leading private fleets in various industries are leveraging fleet management technologies from Cadec Global and its partners to automate their delivery processes and reduce their use of paper to improve operational efficiency, decrease costs and limit environmental impact.



Top 10 Ways to go Paperless

- 1) Electronic Driver Logs
- 2) Fuel-Tax Reporting
- 3) Trip Sheets
- 4) Driver/Vehicle Inspection Reports
- 5) Invoices
- 6) Manifest/Bill of Lading
- 7) Proof of Delivery/Signature Capture
- 8) Over/Short/Damaged/Return Data
- 9) On-site Quality Validation Tests
(OSHA, USDA, FDA – Hazmat, Temp Validation, etc.)
- 10) Maintenance Records

1. Electronic Driver Logs

Electronic driver logs can help ensure compliance with DOT/MOT hours-of-service (HOS) regulations to reduce fines and improve safety.



The use of On-Board Computers (OBCs) and fleet management software for collecting and tracking electronic log information helps eliminate or reduce violations, paperwork, DOT delays and potential fines while automating many manual, time-consuming processes. Cadec's advanced fleet management system with OBC provides full GPS and electronic on-board recording capabilities, connecting directly to the engine control module (ECM) of the vehicle. Log functions on the driver's display panel are identical to the layout used in manual logs.

Keeping track of the DOT and MOT rule changes (dates of the changes, transition periods, etc.) for HOS can be a daunting task. OBCs can be configured to track hours and compliance with the particular DOT rule a driver is utilizing. Drivers are warned of impending DOT violations before they occur, and dispatch managers have access to up-to-date available-hours data to ensure drivers are assigned to the optimal routes based on their availability.



IFTA compliant reports can be automatically generated for each driver and vehicle. Date and time calculations of miles within a particular state are tracked directly from the GPS data collected by the OBC through the vehicle ECM. Cadec also provides the required "bread crumb" detail, which is tied to the odometer per IFTA Regulations.

3. Trip Sheets

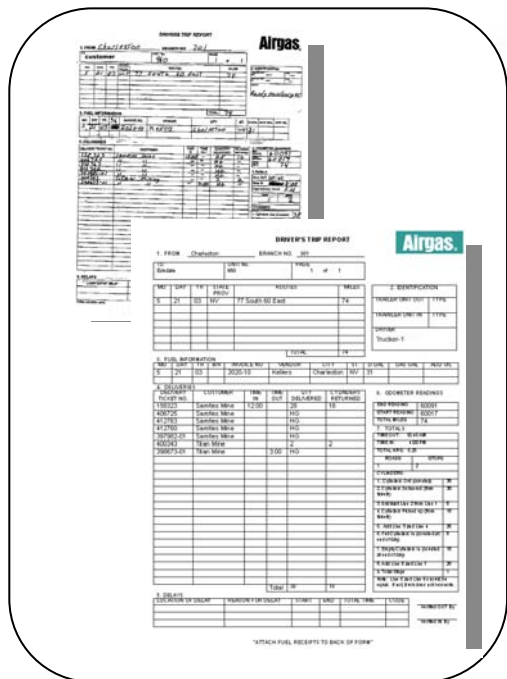
A driver trip sheet has been a basic requirement for nearly every segment of the transportation industry. For hundreds of fleets, every driver completes a paper-based trip sheet each day. The basic information of a trip sheet is comprised of essentially redundant data from the organizations' routing and dispatch systems as well as information available from the vehicle ECM. The basics of any trip sheet typically include:

- What are you hauling?
- What stops are on your route?
- How many miles were driven (odometer reading)?
- What were your expenses?
- What vehicle did you drive?
- What trailer did you pull?
- When was your trip?
- Were there deadhead miles?
- Were there backhaul miles?

Again, this information is usually available in electronic format for many fleets.

Trip sheets are often used as a measurement for activity-based compensation as well. In those cases, data accuracy is even more critical. Not only is information subject to human error, but when compensation is involved, organizations need to protect against fraud and dishonesty. Additionally, the use of paper-based trip reports creates another manual step that requires labor to hand process documents for payroll. Operations costs are higher, and payroll processing takes longer.

- Are trip sheets used for payroll?
- How long does payroll processing take?
- Are all documents needed for processing available?





A mid-sized fleet with 200 vehicles would require more than 60,000 trip sheets per year. Today's advanced fleets are leveraging OBCs such as those offered by Cadec that provide electronic trip activity to drivers and management. Activity-based compensation is accurately calculated electronically based on integrated route detail, driver and vehicle activity. Eliminating paper-based trip sheets results in more efficient business processes, reduced labor costs, accurate payroll and more satisfied drivers.

4. Driver/Vehicle Inspection Reports (DVIR)

Safety is a primary concern for most fleets, and inspection reports are a proven method of avoiding potential accidents or vehicle issues. Many organizations require multiple inspection reports for each vehicle, each day. This can include a driver inspection, a vehicle pre-trip inspection and a vehicle post-trip inspection.

Using data collected with an OBC, fleet management systems can generate inspection reports automatically. Checklists can be presented to a driver or inspector every time a route is started, with required steps before drivers can log-in and start their trips. This information can be sent electronically to a vehicle maintenance application or any required supply chain system.



“One Cadec customer was running nearly 2,000 vehicles in its food processing and delivery business. The company’s driver/vehicle inspection reports required four separate paper forms for each vehicle every day, totaling over 8,000 pieces of paper daily. Using Cadec’s fleet management solution, the company was able to execute its inspection reports electronically, not only eliminating the cost of the paper, but drastically reducing the labor costs required to process each report. The company achieved ROI on its entire fleet management system by simply eliminating one paper-based process.”

5. Invoices

A common goal for many businesses, particularly those involved with deliveries, is how to accelerate the time from order to cash. Lengthy accounts receivable timelines can have a significant impact on an organization’s operations and profitability.

With on-board computing and mobile delivery systems, electronic invoices can be generated on-site in real time, eliminating paperwork and improving accounts payables for customers and accounts receivables for



deliveries. Invoices can be customized and line items can be updated and modified for improved invoice and inventory accuracy. Invoices can then be immediately printed as a PDF file and emailed to the customer. Many systems also provide electronic signature capture and printable sales receipts as well.

Electronic invoicing not only reduces other manual, paper-based process, it reduces payment errors. Sending electronic invoices also improves customer service, reducing costs and improving cash flow at the same time.

6. Manifest/Bill of Lading

Cargo documentation is a requirement for any trucking company. Regardless of whether an organization is a truckload, LTL, or Private Fleet, every driver in every vehicle will have some type of manifest or bill of lading for each route. These documents are typically multi-plied and may be multi-page. Drivers are typically given a booklet of paperwork every day that details delivery items for their trip(s).

Depending on the route and the cargo, these documents may also need to comply with a number of federal regulations. Drivers and vehicles must comply with U.S. Department of Customs' Container Security Initiative (CSI) customs regulations, and fuel/hazmat haulers also have to abide by Homeland Security and other safety regulations. These high-risk containers have the potential for scrutiny that can delay the supply chain and result in more paper and more manual reporting by drivers.

Often the manifest/bill of lading will also serve as a receipt for both the shipper and the consignee, as well as a legal document between the shipper of a particular good and the carrier detailing the type, quantity and destination of the good being carried.

In-cab OBCs such as Cadec's Series 100, combined with mobile/handheld computing devices and integrated fleet management solutions, can provide drivers with electronic manifest information that eliminates the need for paper. Arrival and departure times, as well as odometer readings and vehicle status, are captured automatically. Not only does this improve productivity and data accuracy for drivers, it also allows users to submit queries electronically to determine the status of cargo manifest. Payroll expenses are also reduced due to the elimination of time-consuming paperwork, and data is available for future audit and/or reporting purposes.



7. Proof of Delivery/Signature Capture

In the past, when drivers arrived at a delivery site, they needed to hand-write the time in and time out, odometer readings and so forth. Now drivers just need to hit a button indicating they've arrived. All required information can now be captured electronically and automatically when a driver completes a delivery. (The information about arrival, odometer reading, etc. is actually available in real-time throughout the delivery event.) Arrival data can even precede the delivery event, as geofencing can be set up around an account location. As soon as a truck enters/exits the geofence, arrival and departure information can be transmitted.



An OBC system such as Cadec's Series 100 with PowerVue and Mobius TTS will automatically time tag a delivery event. Every vehicle and driver action, from the time the driver changes his DOT status from "drive" to "on-duty" and later back to "drive," is listed in his log and on all reports with precise start and stop times. Attaching a delivery event to that activity can show a driver making a delivery and provide the account name, number and location, all accessible in seconds via the reporting tools. The driver can also enter the product and unit count into the OBC. More advanced delivery systems may offer digital photographs of delivery items to validate quality or for proof of delivery. These items can be immediately uploaded to various supply chain and/or customer service systems.

Additionally, use of a handheld device enables even greater accuracy, allowing entire invoices to be delivered and receipt acknowledged with signature-capture technology, providing positive data about not only the time and date of delivery, but including the actual identity and signature of the receiver. Electronic signature capture will alleviate yet another paper-based process that must be collected, collated and stored, saving time and reducing costs.



8. Over/Short/Damaged/Return Data

The efficiency of tracking delivery irregularities can be increased and processes streamlined in the paperless environment. Over/short/damaged (OSD) data can be entered into the OBC or handheld system by the driver at the delivery site. That data is sent to the database and is visible electronically to inventory control personnel far in advance of the driver actually returning paperwork to home base—allowing invoices to be immediately updated and inventory levels adjusted on the day of delivery. In fact, invoice adjustments can be made while on site to improve cash flow and accounting accuracy.

Additionally, damage codes can be assigned in the system. Use of these codes can help isolate where in the process the damage may have occurred (handling, storage, etc). Return items can also be tracked in the same manner prior to the driver returning to the yard, allowing customers to be credited and returned items restored to inventory as soon as the driver has collected the items to be returned. This can also help identify and optimize backhaul opportunities based on real-time space availability.

Over Short & Damaged Report					
Courtney Andrews / 121 Time Zone ET (Eastern)					
Start Date:	01/03/2006 19:00	Vehicle ID:	5050		
End Date:	01/06/2006 18:59	Trailer ID:	6451	221 TT1	
Account Name / Account ID: Truimby Plumbly / 12056789					
Date & Time	OSD Product ID	OSD Product Desc	Type	Description	Quantity
01/03/2006 13:17:00	Wheat - 2110	Wheat - 2110	OSD	OS on back	1
Product Damage					
			Labels	Other	1
				Other	1
				Other	1
Account Name / Account ID: The Last Chance / 670767076					
Date & Time	OSD Product ID	OSD Product Desc	Type	Description	Quantity
01/03/2006 12:30:00	Wheat - 2110	Wheat - 2110	OSD	OS on back	1
Product Damage					
			Labels	Other	1
				Other	1
				Other	1
Grand Totals					
				Other	3
				Other	3
				Other	3

9. On-site Quality Validation Tests (OSHA, USDA, FDA – Hazmat, Temp Validation, etc.)

A visit from any federal official or any government inspection is always a time of heightened anxiety, as even the most compliant and prepared company feels nervous as inspectors pour over handwritten forms and stacks of records. A paperless system affords peace of mind by delivering data via a computer monitor or on neatly printed pages, and after the data has been reviewed for completeness and accuracy, with no worries of lost or misfiled documents. Data can include temperature variations, door openings and closings, route information, tire checks, or any other data that the OBC is able to capture.

Food distributors have temperature requirements that may need validation reports for customers. Additionally, U.S. Department of Agriculture and/or the Food and Drug Administration may require a variety of check-steps, inspections and audits for quality assurance. Without a paperless system, the added workload can become extremely costly and reports can be inaccurate.

Hazmat, chemical and petroleum distributors must test and verify their cargo upon receipt and upon delivery to ensure the correct materials are delivered. Each test must be executed and logged for every delivery to



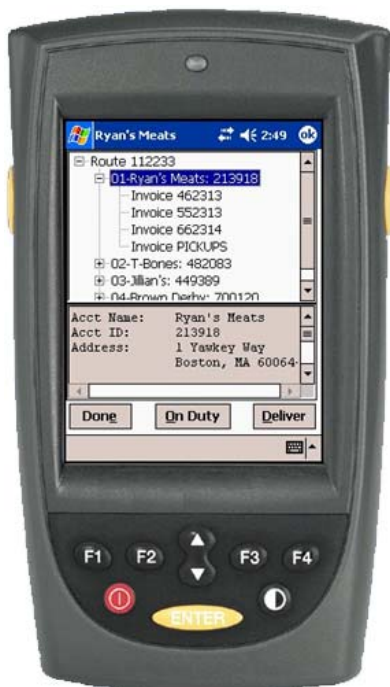
ensure safety and security. Additionally, OSHA may require that safety steps be taken to protect drivers and delivery staff. Paperless quality validation can drastically accelerate business processes and workflow, resulting in significant cost savings.

10. Maintenance Records

Proper vehicle maintenance is crucial in this industry. Erratic or missed vehicle maintenance can lead to trucks that are less efficient and less safe, causing an increase in operating or replacement costs. With vehicle technicians often responsible for as many as 25 vehicles each, electronic recordkeeping allows for more accurate tracking of maintenance intervals and more timely fleet maintenance by reducing much of the paperwork tied to vehicle service. Maintenance oversight is streamlined with supervisors able to extract reports showing, for example, the exact number of miles a vehicle has travelled in a specific time period. The fleet management system's ability to capture this data directly from the vehicle eliminates the possibility for data entry error that can occur when mileage and other information needs to be extracted from paper forms generated by drivers. Additionally, there is no need to calculate mileage since or until a maintenance service—simply enter the parameters and generate a report. A paperless approach improves preventive maintenance processes, ultimately improving vehicle reliability and driver safety.

Summary

As this paper demonstrates, going paperless brings tremendous benefits to trucking fleets—improving operational efficiency and reducing costs—and these benefits are completely achievable with today's advanced fleet management systems. Companies who have made the transition report significant time and cost savings, as well as safety improvements. To learn more about how to get started, visit www.cadec.com.



Cadec Global: Fleet Management Solutions for Delivery Optimization

Cadec's DeliveryTracker™ application software provides out of vehicle functionality on a variety of leading handheld computer systems. By integrating handheld devices/mobile computers, delivery accuracy is greatly improved with dynamic features such as wireless load and unload, invoice printing, barcode scanning and electronic signature capture.

Cadec's Series 100 on-board computers are designed to interface directly with many Windows CE handheld devices – expanding driver's mobility and connectivity while improving overall supply chain visibility.

- On-site, accurate invoicing allows for instant credits
- Printed receipts/invoices on-site
- Improved inventory management with bar code scanning or digital image capture
- Real-time proof of delivery, signature capture and routing information
- Mobilized supply chain management with data collection and communication

Cadec's fleet management software now integrates seamlessly with all the leading handheld devices used in trucking cabs: HandHeld Products, Intermec, Motorola and Psion Teklogix. No other fleet management vendor provides out-of-the-box integration with such a broad range of devices.

DeliveryTracker runs on a handheld computer and is completely integrated with the Series 100 on-board computer (OBC), providing an out-of-cab application. The handheld operates on a Microsoft® Windows® CE operating system, setting up a peer-to-peer relationship with the OBC.

Following every delivery and pickup, the handheld passes the data to the OBC. The OBC then handles the communication of the information back to the office. It also continuously backs up the data, creating a paperless delivery environment with no single point of failure. This simplified integration offers the added benefit of one communication method and significantly lowers your operating costs.



Increased Productivity

- Maximizes driver productivity
- Route flexibility
- Faster, more efficient deliveries
- Fewer mistakes

Electronic Signature Capture

- Reliable proof of delivery
- Delivery and accounting records are kept current
- Discrepancies are eliminated

Automated Data Capture

- Facilitates product information throughout the delivery chain
- Information is captured at point of occurrence
- Paperwork inaccuracies eliminated

Easily Managed Delivery Information

- Assurance that all items (including cases) are delivered
- Barcode scanning verifies that correct products and quantities are delivered
- Drivers are alerted to problems
- 100% accountability

Payment Handling

- Real-time billing information
- Automated credit generation
- Mobile printing
- Multiple invoices

Using DeliveryTracker with your handheld computer will significantly improve customer service and streamline the delivery process. Valuable time is no longer lost while your customers "check in" delivered items. This allows your drivers the opportunity to increase the number of stops they make in a day, increasing profitability.



Why Cadec?

For more than 30 years, Cadec has set the standard for fleet management solutions. Cadec's Mobius TTS has a longstanding leadership position as the fleet management system of choice for improving safety, customer service and cost savings.

Our continued innovation and use of advanced technologies makes PowerVue the most flexible, customizable, and scalable system available to meet the needs of large, medium, and small fleets. PowerVue couples Cadec's decades of experience providing business process automation and telematics to the transportation industry with a new scalable and open standards-based architecture. The result is a single integrated software solution that unifies systems and streamlines processes to drive better business performance at a lower cost of ownership.

Cadec customers benefit from lower transportation costs, improved customer service and optimized asset utilization. No other fleet management vendor provides the flexibility and customization needed to address the business challenges faced by today's leading transportation companies.

To Learn More

To find out how Cadec's PowerVue can help you reduce costs while protecting the environment, please call **1.800.252.2332**, email sales@cadec.com, or visit us on the web at www.cadec.com.