



# Digital Transformation in Transportation and Logistics

***Providing Rapid Access to Systems and  
Content Across the Supply Chain Ecosystem.***

**“The digital revolution has profound and specific implications for the transportation and logistics sector. In order to survive and thrive as they transform into digital businesses, companies in this sector need to consider each step of the value chain, from acquiring and delighting customers, to increasing operational efficiency.”**

*Source: “Pathway to value creation” – McKinsey & Company, September 2015*



## Executive Summary

Changes in the global economy are driving transportation and logistics providers to rethink their business practices. Most providers have a significant number of staff assigned to manual data capture and exchange activities such as Track & Trace, gathering freight bill invoice information, managing customs forms, or securing proofs of delivery (PODs). Although essential, these activities are resource intensive, error-prone and tend to slow down billing and cash collection. Most of these tasks along with consolidation and increasing global competition have worked to reduce already-thin margins.

Today, transportation, Logistics and third-party logistics providers (3PLs) all struggle to access information they have locked in disparate IT silos and legacy applications which make information related to inventories and shipping difficult to view and track across the supply chain ecosystem. They also struggle with IT infrastructures of older platforms, aging systems and multiple integration points.

Couple this with time-consuming paper and spreadsheet-based supply chain processes, changing security requirements, an unskilled labor force, and rapid personnel turnover, and you have an industry that is challenged to keep pace and control costs. Add to this, changing cross-border regulations, increasing government oversight and ever-changing DOT requirements, carriers are forced to react on an ongoing basis—which adds to ever increasing costs.

To accelerate growth and profitability, companies need to eliminate costly manual back-office functions and integrate their processing across the supply chain ecosystem with shippers, carriers, logistics partners, and other trading partners.

## Key business requirements

Transportation companies need rapid access to information, both paper-based and electronic as it enters the organization. This typically requires control over multiple systems and processes across geographically disperse locations in order to provide all of the relevant information required for timely and accurate processing.

In order to move greater volumes of goods through the supply chain faster and to improve company performance companies need to streamline processes and cut costs. Real-time visibility into the supply chain process is also crucial, so transportation and logistics companies need to look at new technologies that help expedite a digital transformation in their processes. They need audit trails and proof of performance to ensure that business processes are followed, to maintain regulatory compliance and so they can improve visibility and performance—all with the goal of improving productivity and the bottom line.

**“To unlock growth and profitability in a challenging sector, transportation and logistics companies need to make bolder and more astute strategic choices than ever before.”**

*Source: “Creating value in transportation and logistics” – McKinsey & Company, November 2015*

## Welcome to the Digital Age

Mobile phones, tablets, and the Internet are all changing the way we do business. Companies like Apple, UBER and Airbnb have changed the face of the music, cab, and hotel business in ways we never would have thought of 10 years ago. The same technology that has enabled those changes is now acting as a catalyst to promote significant changes in the transportation and logistics industry. In order to succeed in the digital age, transportation and logistics companies need to consider how each step of the value chain, from acquiring new customers to customer engagement can be improved with digital technologies.



Digital technologies give you new opportunities to win market share against competitors by providing a better customer experience. It provides flexibility to handle customer inquiries, an opportunity to increase market size with digitally enabled products and value-added services and it leverages the data that large carriers and freight forwarders own.

## Meeting Customer Expectations

Today's customers are more connected and empowered than ever before. They demand intuitive, self-service processes—accessible from any device, anywhere and at any time. Digital tools enhance transportation and logistics services by making them faster, cheaper, and easier-to-use—as well as more transparent and agile.

By having information available from the first contact, companies can significantly increase responsiveness to their customers, provide a higher level of engagement and better manage their businesses—while significantly reducing their operating costs. Digital solutions not only reduce costs, but also add value to services while optimizing both customer-facing and internal processes.

## Building on Industry Leading Enterprise Capture Technology

iKAN document and data capture solutions are based on iKAN's Virtual Document Center (VDC) and Abbyy FlexiCapture technologies and platforms for automated document capture, text recognition, analysis, and classification. They enable small, medium and large transportation and logistics companies manage their document-driven business processes more efficiently and productively.

FlexiCapture offers powerful and intuitive capabilities that streamline time-consuming and labor-intensive tasks associated with paper-based processes.

What makes iKAN's VDC & ABBYY FlexiCapture stand out from other document capture software on the market is the exceptional flexibility, superior accuracy and transparency of its technology – three qualities that drive the development of our transformative software. This powerful technology can:

- Automatically process different kinds of documents in a single stream
- Accurately classify documents
- Extract data from complex multi-page documents with continuous tables
- Provide good-quality data from even poor-quality documents, such as faxes

## Automating Manual Processes

Manual processing of forms, and business correspondence is not only tedious, time consuming and labor intensive, it is also error prone and costly. It creates delays in recording data, responding to inquiries, and satisfying customer requests. To extract the data from documents, there are two basic approaches—resource-intensive manual data entry or the use of software for automated processing.

Our solution eliminates the manual processing and handling of both paper-based and electronic documents by providing a comprehensive software solution that automatically captures documents like forms or unstructured documents, like business correspondence (which may be printed, handwritten, or typed) are digitized and then the data is automatically read and “captured” of data from paper documents such as bills of lading, freight forwarding documents,



Broker/shipper agreements, PDF's and other business correspondence. Once captured, the content of those documents is automatically extracted, validated and placed into the appropriate workflow for processing.

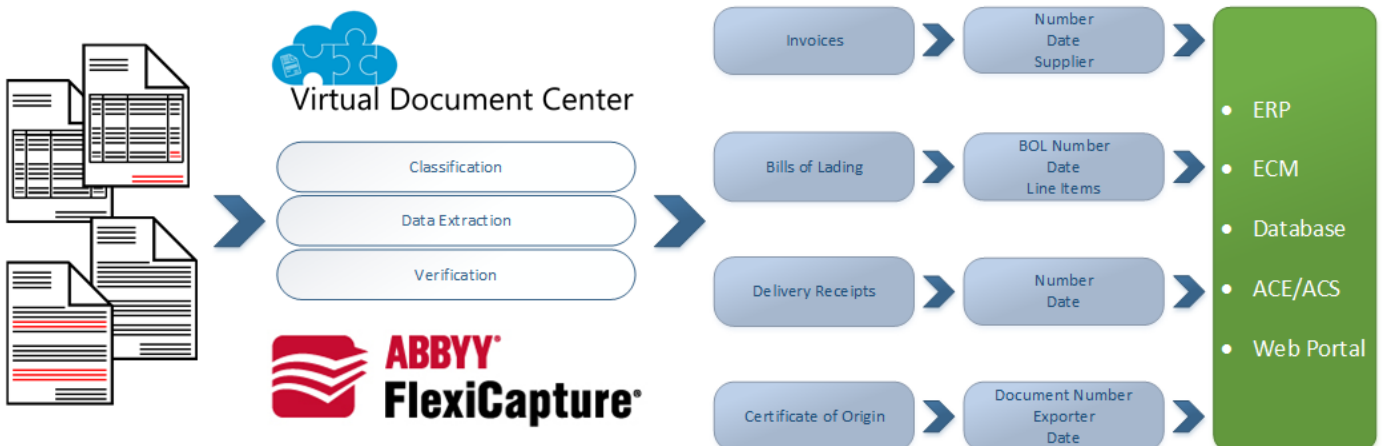
The software then facilitates interaction with customers and co-workers to automatically complete work processes while resolving inconsistencies, requesting missing or supporting information, obtaining the necessary approvals, and acting upon and exporting the results into the appropriate systems of record – all while ensuring the consistent application of business rules needed for regulatory compliance and governance.



### Document Capture and Data Extraction

Using the Virtual Document Center & ABBYY FlexiCapture in transportation and logistics provides for document capture and data extraction with the workflow, people, and technology needed to improve the efficiency of business processes. It provides a crucial connection between an organization's customer engagement staff and its business processes to help increase responsiveness, meet SLA's and gain a competitive advantage to better manage and grow while reducing operating costs.

As Credit Applications, Purchase Orders, Bills Of Lading, Insurance Documents, Customs Forms, Broker Agreements, Terms and Conditions, Contractor Information and PODs enter an organization through various input sources, it is identified, categorized, and serves as a trigger to initiate related workflows and notifications to the appropriate staff who require the information, As a result, department heads have greater control over operations options like staffing and workflow from an end-to-end perspective.





## Business Process Management

Given that content and process are tightly integrated, it is obvious that there is an impact on the business organization when process or the way content is managed changes—for example, replacing physical paper with digital content. Business Process management (BPM) serves as a digital transformation enabler, allowing organizations to bring people, process, and information together across the enterprise—and beyond. BPM enriches the process ecosystem by connecting people-to-people, systems-to-systems, and people-to-system interactions. The result being increased efficiency, agility and flexibility to meet user demand along with improved customer service and responsiveness across the enterprise.



## Collaboration

iKAN helps organizations automate and simplify processes to provide intuitive interactions across the supply chain ecosystem with shippers, carriers, logistics partners, and other trading partners. iKAN helps organizations meet their customers “where they live” and empowers them with the ability to serve themselves and interact with your company, when and where they want. Information can be captured from any source—including mobile devices, internet portals, desktop scanners, fax and MFPs—all at the point of entry, where customer-facing interactions actually occur. Companies can also automatically respond to any customer interaction through SMS, MMS, email, phone or fax, raising the bar for responsiveness. This collaboration improves customer engagement and overall satisfaction in business processes while simultaneously reducing operating costs.

## Streamlining Customer Engagement

Instant customer reach, direct access to customer data, and low-to-zero transaction costs are all inherent benefits of iKAN and ABBYY in transportation and logistics. Companies can easily engage customers, however and whenever they want: capturing information, getting approvals, performing Track and Trace, proof of deliveries, exceptions, changes, and more. Moreover, real-time event monitoring and powerful intelligence and analytics are available for process optimization.

Prompt, easy to access and pertinent customer engagement is what iKAN and ABBYY are all about. It’s powerful capture and case management capabilities provide a comprehensive view of each customer. Rules-based processes enhance decision-making so that customer representatives can provide relevant, context-driven interactions with customers at the time of engagement.

## Automating Customs Documentation

ABBYY FlexiCapture automates the classification and advanced data capture for Customs documents. Bill of Lading line items, Certificates of Origin and Commercial Invoices are automatically classified, and the relevant data is extracted and exported using ODBC connections to existing electronic systems. The extracted data is validated against databases and business rules to ensure the integrity of the data and allow operators to deal only with exceptions. The exported data can then be automatically prepared for filing via the standard Automated Broker Interface (ABI).

## Increase efficiency of accounts payable

Paper is still a common format for invoices in Transportation and Logistics, and processing paper invoices not only requires entering invoice data but also matching to other documents to confirm and approve invoice contents. iKAN Virtual Document Center and ABBYY FlexiCapture streamline invoice processing and helps organizations realize benefits in Accounts Payable like paying invoices accurately, growing business without increasing staff, maintaining good relationships with suppliers and improving budgeting and forecasting.



## Competing in the Digital Age

iKAN and ABBYY help transportation companies address key business challenges by bringing them into the digital age. iKAN and ABBYY helps companies overcome transportation challenges such as globalization and the need for more flexible supply chains, improved security and compliance. Using iKAN and ABBYY in transportation and logistics can help companies benefit from:

### **Automating the Extraction, and Delivery of Information**

iKAN and ABBYY automate labor-intensive back-office functions to extract data from both paper-based and electronic documents as well as mobile and Internet-based supplier interactions.

### **Improved Operational Efficiency**

Through enhancing core business processes such as customer engagement, contract management, customer billing, and accounts payable iKAN and ABBYY can help reduce operational costs.

### **Efficient Supply Chain Management**

From capturing and securely managing documents associated with shipments and linking critical shipping documents with other business processes.

### **Manage Complex Scheduling and Logistics**

Optimize global sourcing, outsourcing and subcontracting while managing complex, multi-site operations to expedite processing and maximize profits.

### **Better Customer Engagement**

By providing a single view of customer information across the enterprise so that anyone engaging with customers can quickly respond to inquiries and resolve issues when they arise.

### **Reduce DSO (Days Sales Outstanding)**

Improve DSO and enforce payment terms by using iKAN and ABBYY Transportation and Logistics tools to monitor freight bill payments.

### **Expedite Invoicing and Payment**

Eliminate the need to chase down PODs and manually update freight payment processors and shippers while expediting the payment of outstanding invoices.

### **Increase Customer Retention**

By improving the overall quality of customer service through all phases of the customer lifecycle – particularly in the areas of contracts, billing, claims management and analysis of customer trends.

### **Comprehensive Asset Management**

Through more efficient management of all documentation associated with the procurement, maintenance and retirement of core assets – while making information immediately available to your employees responsible for managing and keeping those assets moving.





Clay Lacy Aviation (CLA) based in Van Nuys California has been a pioneer in private aviation since 1968. CLA offers their affluent clients and business executives private jet charters, aircraft management, support and FBO services for their managed fleet of 75 aircraft. Aircraft owners rely on Clay Lacy's end-to-end customer service for everything from pilot staffing and training to trip support services like catering and fuel arrangements, as well as chartering their jets and handling the associated invoicing and collections.

As CLA has grown so has their invoicing requirement. Every year CLA processes over 35,000 multi-layer invoices with supporting tables requiring a staff of 20 full-time staff to process.

CLA needed to replace an inefficient legacy manual keying process into Excel spreadsheets with a modern, automated invoice processing workflow to avoid adding headcount as their business grew. CLA wanted their employees focusing on customer service and not paperwork. Furthermore, CLA's back-end system of record was a 30-year-old ERP system running on an AS400.

CLA broke the project into phases: 1) Simple Invoice Processing with a Workflow for Approval Processing 2) Slightly more complex invoices that might be tied to other invoices in the workflow 3) Line Item Extraction of Invoice Data 4) Flight Expenses: Cover Sheet with multiple receipts and 5) Fuel Invoices which turned out to be the most complex.

Using ABBYY FlexiCapture for Invoices, CLA now processes over 50% of their invoices automatically, reduced error rates from manual data entry from 4% down to virtually 0%. CLA's Accounts Payable staff's efficiency increased by more than 35% and they now have more time to analyze invoices vs. processing them. CLA has been able to add 25% more aircraft without adding any more staff.

For more information:

<https://www.abbyy.com/en-us/casestudies/premier-private-jetservice-to-increase-efficiency-by-more-than-35-percent-with-invoice-automation/#sthash.JFWPbajs.dpbs>



Since 1957, CTSI-Global has provided valuable supply chain management expertise and technology. CTSI-Global helps shippers and 3PL's to manage and control all aspects of their supply chains - physical, informational and financial - within one global database. Global company headquartered in Memphis, TN USA, with wholly owned locations worldwide. CTSI's core services include TMS, freight audit and payment, business intelligence and global consulting. CTSI works with over 10,000 carriers supported in all modes with over 3 million transactions processed daily and over \$9 billion in annual freight dollars processed.

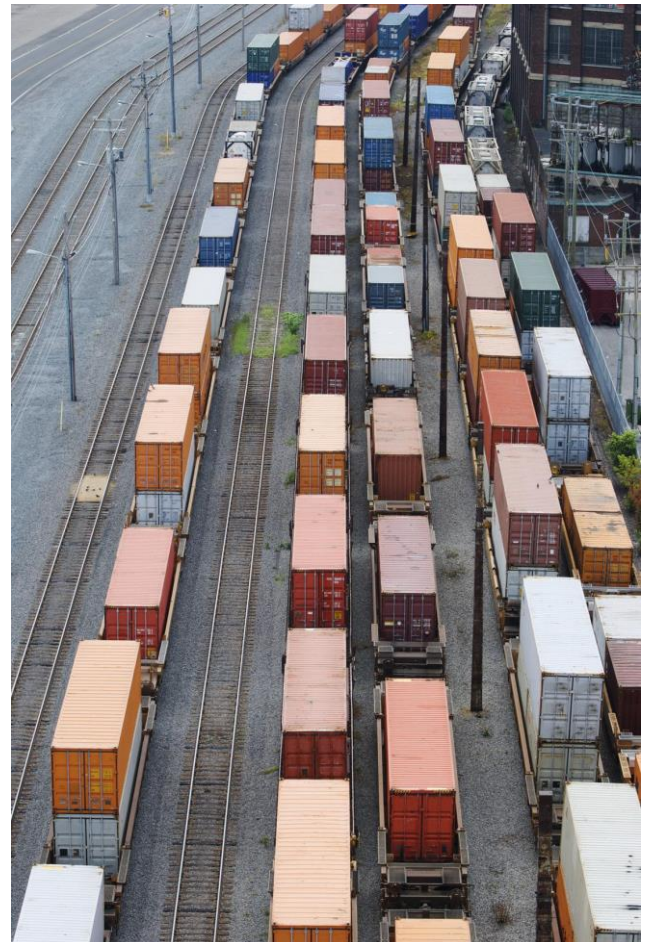


While EDI is the primary input into CTSI's 3PL workflow, they knew it was critical to also support paper documents. Although CTSI processes only 1% of their invoice documents manually it still requires them to hand code 6,000 invoices per day.

Using ABBYY FlexiCapture for Invoices, CTSI Global automates document capture on multi-channel inputs to process and validate through a 45 point audit process to improve accuracy. Once the invoice data is captured, classified, extracted and validated it is fed into their logistics workflow and stored image and metadata and the supporting document in their ERP system. CTSI particularly likes the ease of trainability for ABBYY FlexiCapture for Invoices to avoid the need for complex key word programming.

A key part of the Digital Transformation for CTSI is that extracted data is the basis for their business intelligence for Freight and Smart Parcel Cost Reduction Consulting Services which is extremely valuable for their clients for cost optimization and gain leverage in carrier negotiations.

Better integration, higher employee satisfaction, less transaction errors, lower costs and new digital revenue streams are just some of the Digital Transformation benefits enabled through ABBYY FlexiCapture.





Based in Shreveport, LA, AFS is a world leader in transportation cost management processing over 70,000,000 invoices a year for its 1400 customers. With over \$10B in annual shipping spend managed, AFS has the data and experience required to lower their customers' costs and add value to their bottom-line. AFS partners with companies to constantly reduce shipping costs. AFS incorporates freight and parcel audits with international cargo insurance, transportation analytics, and shipping cost management to round-out the most comprehensive service offering available.

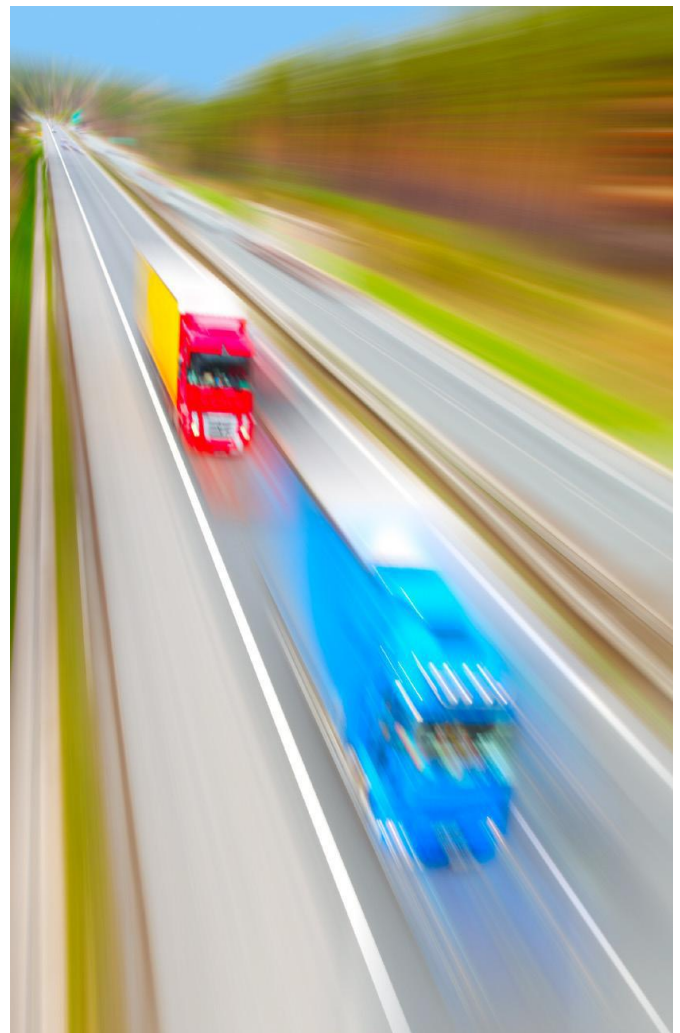


AFS has been an ABBYY customer since 2008. While the percentage of invoices processed using EDI has grown considerably to 95%, the growth in paper invoices needed to be transformed continues to increase every year as AFS's business continues to grow. It is critical to be able to make analog documents fit into an existing digital workflow.

With ABBYY FlexiCapture, AFS has been able to significantly increase the number of fields to be extracted from their invoices in 2008 from a few to over 50 fields today. This rich meta data is accessible through AFS's business process work-flows to help their customers leverage the most up to date data to reduce shipping costs. Furthermore, turnaround times have dropped over 50% and FlexiCapture's classification accuracy eliminated the need for cover pages and separator sheets resulting in savings of \$60,000. AFS was able to significantly increase their work load without adding any additional staff

For more information:

<https://www.abbyy.com/en-us/case-studies/leader-in-transportation-cost-management-speeds-invoice-processing-with-abbyyautomated-data-capture/#sthash.AWfXS9oz.dpbs>





## Mobile Capabilities

Building on the strength of iKAN and ABBYY technologies, iKAN and ABBYY transportation and logistics tools leverage mobile devices to capture, cleanse, extract and validate the information that drives today's supply chain processes. ABBYY FlexiCapture Mobile app allows any delivery individual to capture and submit a Delivery Receipt or signed Bill of Lading in the field using simply their mobile phone. Capturing, recognizing and extracting key data held within a simple Delivery Receipt can initiate a billing process and, via existing electronic systems, provide both the shipper and receiver in real time a copy of the signed Delivery Receipt.

With this powerful capability, companies can quickly and easily add real-time, enterprise capture and process management capabilities to their mobile apps in order to meet customer needs and provide better customer service.

## Process Intelligence and Analytics

Take the power of process information to a higher level, by utilizing the process intelligence and analytic capabilities to manage your transportation and logistics operations. Its advanced functionality helps eliminate the high cost and complexity of conventional process intelligence by providing real-time event monitoring and process optimization to maximize work throughput and improve process decision making. It provides real-time, low latency process and data analytics, visualization and ETL (extract, transform, load) capabilities to bring companies closer to their customers and improve the bottom line through operational efficiency.

## Compliance

As government regulations continue to increase in the transportation and logistics industry, companies need to be more nimble to meet compliance-driven objectives. iKAN and ABBYY allow companies to trace and audit the acquisition of data and provides a compliance framework that ensures that each step in a business process meets both local and global regulatory requirements.

## Integration

iKAN and ABBYY technologies integrate Business and IT systems; Line-of-Business applications, ECM repositories, Databases, E-Mail repositories, File Shares, and more, including:

- EMC Documentum
- FileNet
- Hyland Onbase
- IBM BPM/Lombardi
- IBM ImagePlus
- Kofax
- Lexmark
- OpenText
- Mainframe Legacy Systems
- Pega Systems
- PeopleSoft
- Relational Databases
- SharePoint



### **Make a Strategic Impact On Your Business**

As technology continues to advance, new software tools and frameworks like those available from iKAN and ABBYY will have a measurable and sustainable impact on the transportation and logistics industry. Whether in the cloud or on premise, iKAN and ABBYY industry solutions can provide your company with the agility and return-on-investment necessary to react to new business opportunities and changing regulations while leveraging your existing systems. It is a robust solution designed to improve customer engagement, increase sales efficiency, and improve business processes—all while reducing costs, achieving regulatory compliance and improving profitability.

### **Seeing is Believing**

Many organizations use iKAN and ABBYY's document identification and data capture technologies. To see what iKAN and ABBYY can do in transportation and logistics visit <https://ikansoftware.com/solutions-2-2/transportation-logistics/>

iKAN Software

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