

Use Cases | Ephesoft Enterprise

Automating document capture brings a variety of advantages to companies and it's users - this document shapes ideas for customer projects

Advanced Capture Solutions

This document was designed to support Sales teams when positioning Ephesoft for potential customer projects. We recommend reviewing the first section to get an overview of document recognition and how to address customer pain points and issues. This information will help in identifying and qualifying prospects.

Once you have set up a meeting with the potential customer, use the second section to prepare for the meeting. If you have questions, please contact your Ephesoft Sales representative.

Automating document capture brings a wealth of advantages to companies and users – this document shapes ideas for customer projects.

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Free form recognition – what is it?

Identifying documents or forms is not a new technology, rather it is a well-known and best practice approach in DMS projects. Most relate forms recognition with questionnaires or application forms. These are structured forms, where the document structure is predictable. There are of course projects that demand free form recognition. These documents cannot be identified via appearance influenced layout. The only way to find the business critical data is to search for key value entries. One of the most common examples is invoice recognition.

Types of text and form recognition

- **OCR - Full Text**

Conversion of an image to a text searchable document, mostly PDF format

- **Zonal OCR**

Entry level of automation. In these scenarios one can define a fixed zone from where entries can be read. The layout of these documents does not vary, therefore it is fixed zone recognition.

- **Forms Recognition**

Defined zones on a structured document are read and often combined with a logical validation of content.

Example: YES / NO – MALE / FEMALE

- **Free Form Recognition**

Information is read and recognized without a preset layout on un-structured documents. Software aligns a keyword to an expected value and a variety of possible values and reads the value matching certain rules the closest. This method is used with invoices, contracts and all documents that are sent to a company from the outside, where there is little to no influence on documents.

Example: Search invoice date or Inv.-Date, use 01.06.2016 or 1st June 2016

Linked Topics

- **Classification**

Classification is a pre-step to recognition. In the classification part, the software has been trained on sample documents to learn the document type it is recognizing. This allows the software to separate between an invoice and a contract. In the early days of forms recognition this was often done via barcodes on documents or so called patch codes that were inserted between prior to the scanning process. Systems nowadays are trained on document content and are not dependent on a separationsheet anymore. The splitting of batches will take place automatically in the background as part of the classification process.

There are customer scenarios where companies rely only on classification functionalities of the software, without using forms recognition. This is done in digital mailroom scenarios, where documents are scanned in mailrooms and the software recognizes document type for the purpose of sending it to the right department or ECM workflow.

- **Validation and manual extraction**

No doubt that the overall goal of a forms recognition project is to achieve complete automation, but there will be cases where users have to interact with the software and documents.

Examples are:

- Value could not be recognized because of image quality or value does not meet expected pattern.
- The system found a logical issue, like invoice shows \$20 Tax, but net is \$100 and with a 9% tax rate it should add up to \$109 in total.

Of course there are more topics to cover, but the above provides a baseline on the available capture solutions.

Use Cases

In this document we differentiate between generic (horizontal) use cases, which can occur in any industry, and industry solutions (verticals) which are specific to certain industries.

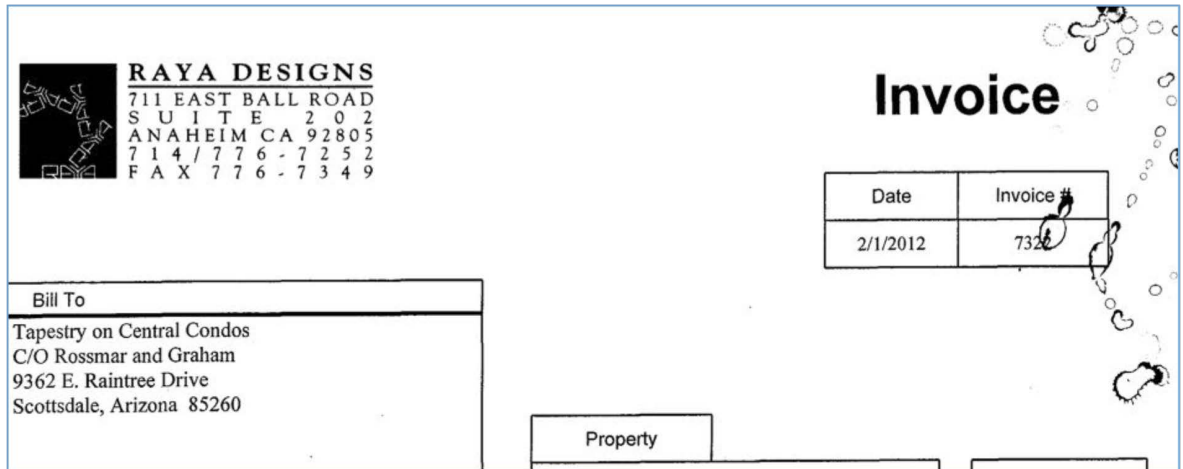
Benefits of automatic form recognition

Generally speaking, the whole point of forms recognition is to extract business critical data and information from documents for smoother processing in departments or applications in the company. If we take a look at the central mailroom of a company, we realize that this department receives all incoming mail, opens and sorts it to the right departments.

Employees recognize an invoice by its layout (called classification in software terms) and then send it to the responsible department or files it in their mailbox for manual pickup.

Once these documents are in the department, the employees search for business critical data in the documents. They know exactly which values they need from the documents. Because this ruleset was defined by the company. In case a business critical value is missing, the invoicing party is contacted to correct the invoice. Just as employees are trained on this process, Ephesoft can be trained. The software will need support in the areas where values cannot be read (image quality) or in case they are missing.

Image 1 – Image jam on scan



The screenshot shows an invoice form with a coffee stain on the right side. The form contains the following information:

RAYA DESIGNS
711 EAST BALL ROAD
S U I T E 2 0 2
ANAHEIM CA 92805
7 1 4 / 7 7 6 - 7 2 5 2
F A X 7 7 6 - 7 3 4 9

Invoice

Date	Invoice #
2/1/2012	7326

Bill To
Tapestry on Central Condos
C/O Rossmar and Graham
9362 E. Raintree Drive
Scottsdale, Arizona 85260

Property

This screenshot shows a coffee stain overlaying the business critical invoice number. This document cannot be completely processed, so the software holds this document in the validation process for an employee to view the document and complete missing data.

Image 2 – Exceptions with documents



CC rent a car

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2. Mieter Theresa Nieschwitz

Wetzlar Abholung. Wunsch TE, FS, PA, 500€ Kaution. 19.10.13 DPA/Hr Nies per Tel

Mietvertrag 1366839

	Datum	Zeit	Km-Stand	Ort	Fahrzeug	N	-CC 312	TGL 8.180 7,5er
Beginn	15.11.2013	13:30	64507	Wetzlar	Gruppe	TE		MAN 759201
Ende gepl	17.11.2013	19:00		Wetzlar				

Menge	Einheit	Leistung		Einzelpreis	Gesamtpreis
1,00	Einheit	Wochenendtarif inkl. 300 Km	Rabatt	231,09	231,09
	Km	Mehr-Km		0,29	

This picture shows a rental contract. This company does not issue invoices and contracts separately; it is the same document. In our example this company does not belong to the core suppliers of the company. Ephesoft was not set up in the invoice batch class to handle such a document type, so the document is sent to validation. If this is a one-time exception, it is manually corrected and sent to the business process. In case this supplier turns out to be a core supplier, one will have to set this document type up in the batch class and it will be recognized in the future automatically.

Advantages for the business process

Ephesoft helps you identify the right documents for the right department and send it to the business process with the highest data quality available. Ephesoft is designed to interact with users when it needs help validating data, but depending on customer's infrastructure, Ephesoft can also match data from documents to IT systems in the organization.

Examples are:

- Validating recognized master data to CRM/ERP systems
- Validating quantity, unit price and sub-totals
- Matching of partial delivery to total order/total delivery
- Matching of summary invoicing

'Payback' – A very important factor in the Sales cycle

Document recognition is one of the few areas that can be truly measured against a ROI during a ECM project. It is important to use this in the sales cycle.

Example

Manual entry of a document:

5 minutes/hourly pay \$40 = \$3.33 cost per document

Automatic recognition of documents and potential correction/validation of a value:

Savings per document: \$3.00

Costs for implementing the solution: \$25,000

Document volume: 200 documents per day x 220 working days = 44,000 documents per year

Processing costs without automation: \$146,520

Processing costs with automation: \$14,520

ROI: approx. 2 months

$(\$25,000/\$14,520 = 1.72 \text{ months})$

Besides the 'hard' numbers on ROI, there are supporting facts for a document recognition solution including:

- Faster customer service
- Quicker customer acquisition
- Accelerated invoicing
- Available cash discounts
- Improved legal certainty
- Take home message: When does automatic document extraction makes sense?
- **Many documents** (Example: numerous invoices, regardless of document length)
- **Complex documents** (Example: long and complex documents with many of line items)

Generic Challenges

Invoice Recognition

One of the most common use cases is invoice recognition. Every company receives invoices and needs to book these into an accounts payable solution. This process is very time consuming on the data entry side, especially if you add in the need to match line items.

Industries facing these challenges

All – no restrictions

When to invest in a solution

Although every company receives invoices, volume and/or complexity is needed to justify an investment. A good base is 100 incoming pages (of invoices) per day which need to be processed by an accounts clerk. Other use case can be, depending on industry, just a few invoices, but very long/complex ones, due to the fact that these invoices have hundreds of line items – e.g. telecom bills, shipping manifests, etc.

What is recognized by the solution

- Header information: Sender, date, number, order number, ...
- Footer information: Invoice total, tax, Sub-Total, Tax-ID, ...
- Line items: Quantity, Description, Unit Price, Sub-Total, ...

Additional benefits

- Line item matching, price matching
- Validating all necessary data (Tax-ID, IBAN, Company-ID)

People interested in such solutions at a customer

- Purchase department
- Accounting
- CFO

Customer Benefits

- Redirected skilled resources to address more pressing issues
- Secure validation of invoices via automation
- Using cash discount

 **Case Management**

Today customers expect fast service. A good base to achieve this, is to address customer issues /requests as fast as possible by the right department. Manual sorting is not appropriate here, due to time and cost pressures companies are facing. In these record reading scenarios, where a record is not only physical paper, but also emails, the software will read customer ID, phone number, name, address and subject as well as all relevant data for routing it to the right department for improved customer service.

Industries facing these challenges

All – no restrictions. It is worth highlighting service oriented companies like utilities, governmental institutions and logistic companies.

When to invest in a solution

A solution in this customer scenario is worth investing in when there is a need of maintaining a heavy document workload and/or when having the need to accelerate internal processes for improved customer service.

What is recognized?

- Contract number, customer number, phone number
- Subject, key word search

Use Cases

- Addressing correct department/knowledge worker
- Completing data entry
- Adding documents to an existing case/record
- Government Regulations/SLA's

People interested in Case Management

- Customer Service
- Sales, Inside Sales

Customer Benefits

- Improved customer service
- Accelerated processes and faster reaction on customer issues / queries

 **HR Documents**

Similar to case management, which is aimed at servicing queries from outside of the organization, HR documents addresses queries and improved service within the company. Human Resources today are far more than just administrative departments; they offer a variety of services and cover topics like employee onboarding, insurance, retirement provisioning, qualification management and more. Employees internally expect fast service and advice from their queries.

Industries facing these challenges

All – no restrictions, but of course effective from a certain company size upwards, especially if there is a high proportion of relatively low paid workers. Focus on recruiting companies, career centers, facility management

When to invest in a solution

Automating HR documents is interesting for companies of a certain size and/or with high staff turnover. This can vary throughout different industries.

What is recognized?

- Application number
- Driving license or other 'certifying' data (Proof of ID)
- Keyword classification and topic search
- Insurance numbers, bank details

Use Cases

- Handing documents to correct knowledge worker/HR business partner
- Completing data entries
- Adding documents to an existing case/record

People interested in HR Documents

- HR department
- Management

Customer Benefits

- Increased employee satisfaction
- Accelerated processes and faster reaction to queries
- Decreasing administrative workload

Central Mailroom – Automating the distribution of documents

The mailroom of a company is the central point for classic inbound communication in an organization. This department has no influence on time, volume and document type that is sent to the company by outside agents. The most common approach in companies not using capture software for mailroom handling, is manual sorting to physical postboxes, which are emptied and picked up by knowledge workers throughout the day.

Industries facing these challenges

All – no exceptions. The most common problem faced is the unnecessary idle time of documents in the department's physical mailboxes, waiting for a co-worker to pick up the documents for department processing. If the documents are digitalized centrally and sent electronically to the departments, the company can expect the following results:

- Faster claims processing
- Use of cash discount
- Improved customer service

When to invest in a solution

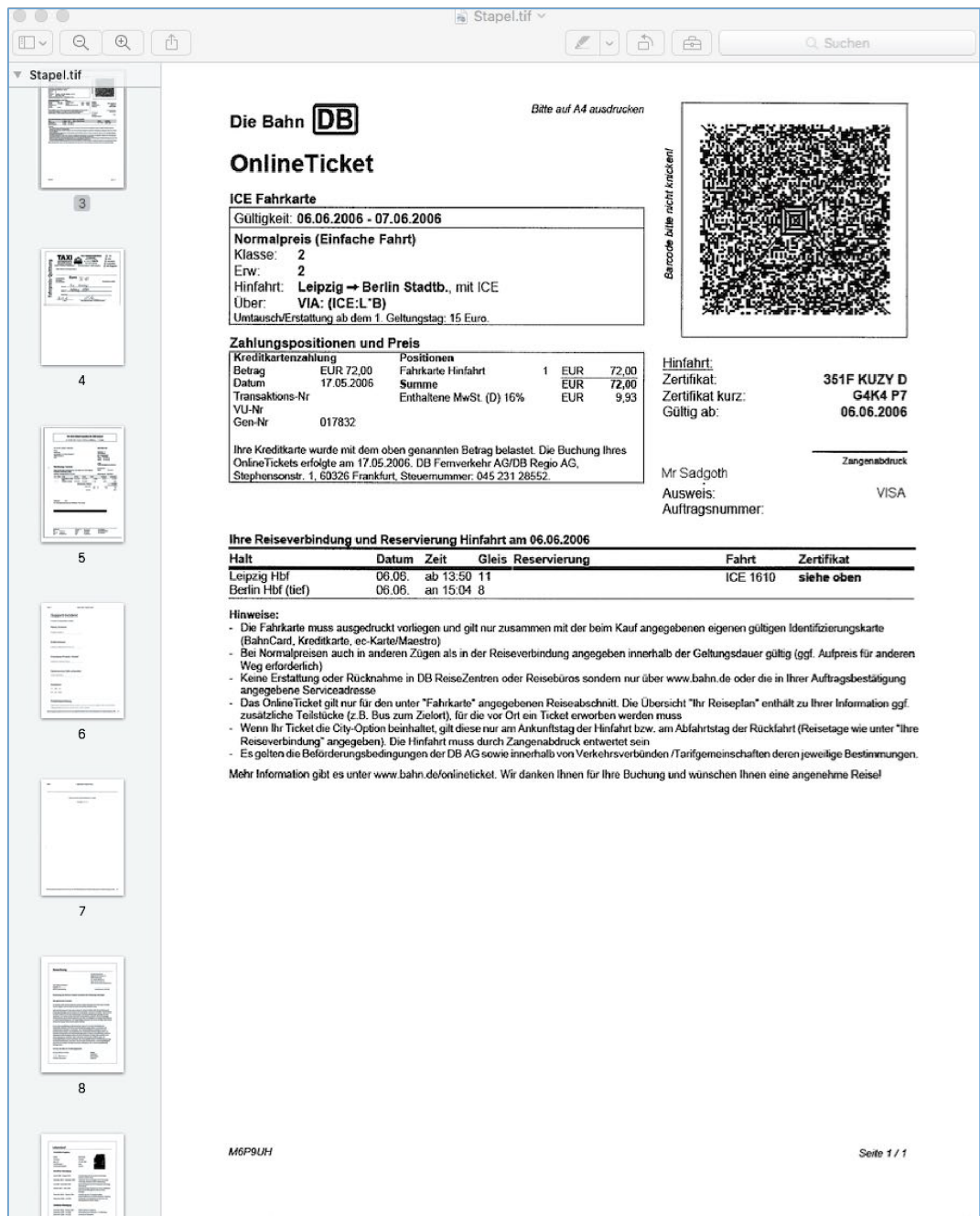
Implementing an automated solution needs to hit a certain volume or the necessity to accelerate document processing, e.g. due to competitive advantages or


What is recognized?

- Document type is classified and sent to the right department / workflow in DMS
- Information in the document to identify the right department/SME in the company

1. Screenshot of scanned batch without using separator sheets:

Mail was opened in the central mailroom and scanned in a batch (Desktop scanner or MFP). Ephesoft is not dependent on separator sheets, which makes it easier to capture and takes off administrative workload from users.



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Normalpreis (Einfache Fahrt)

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Erw: 2
Hinfahrt: Leipzig → Berlin Stadt., mit ICE
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Zahlungspositionen und Preis

Kreditkartenzahlung	Positionen			
Betrag	EUR 72,00	Fahrkarte Hinfahrt	1	EUR 72,00
Datum	17.05.2006	Summe		EUR 72,00
Transaktions-Nr		Enthaltene MwSt. (D) 16%		EUR 9,93
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Zertifikat kurz: G4K4 P7
Gültig ab: 06.06.2006

Mr Sadgoth Zangenabdruck
Ausweis: VISA
Auftragsnummer:

Ihre Reiseverbindung und Reservierung Hinfahrt am 06.06.2006

Halt	Datum	Zeit	Gleis	Reservierung	Fahrt	Zertifikat
Leipzig Hbf	06.06.	ab 13:50	11		ICE 1610	siehe oben
Berlin Hbf (tief)	06.06.	an 15:04	8			

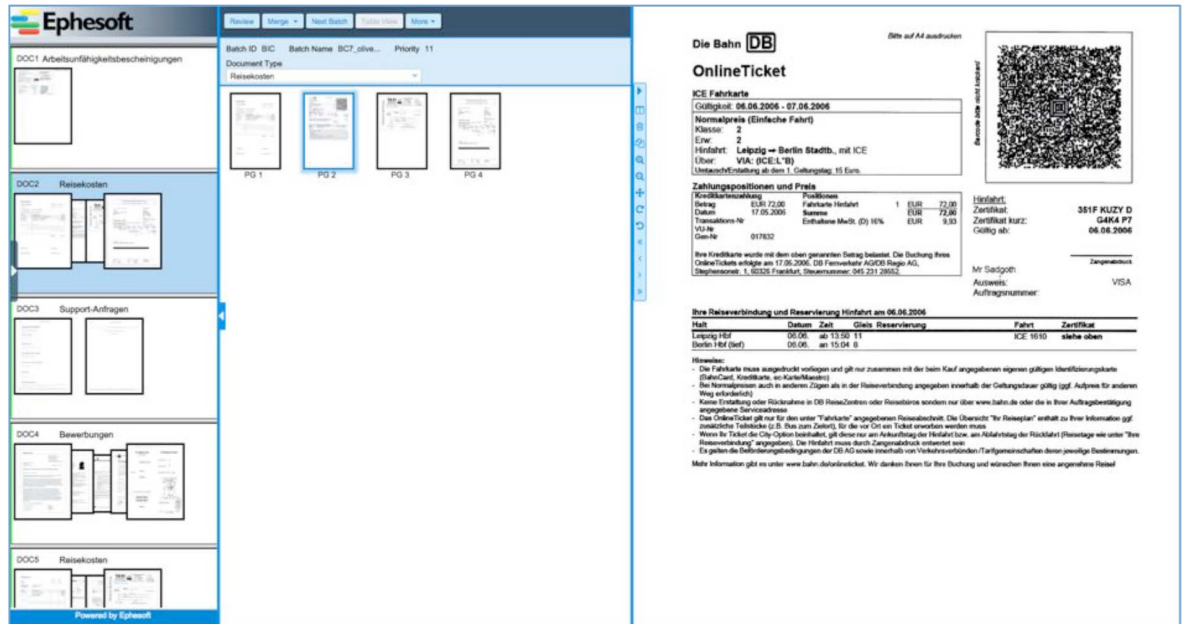
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Mehr Information gibt es unter www.bahn.de/onlineTicket. Wir danken Ihnen für Ihre Buchung und wünschen Ihnen eine angenehme Reise!

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2. Ephesoft splits the batch, classifies the documents and sorts pages to the documents:



This screenshot shows the separation of the scanned batch within Ephesoft. Ephesoft recognizes the different document types without separator sheets or barcodes on first pages of documents. These documents are sent to the right department or LOB for further processing.

Use Cases

- Sending documents to the right department / coworker
- Completing data entries
- Completing cases or records

Person to contact

- Departments, Mailroom
- Sales

Customer Benefits

- Improved Customer Service
- Accelerated reaction times

Industry Solutions

Manufacturing Systems Engineering / Production

The majority of documents in the manufacturing industry contain information on the production of the goods. Additionally, this industry has a significant amount of documents in sales and human resources. Many documents are captured manually in these companies, which is tied to high labor costs when processing these documents internally.



Use Cases

- Commercial documents like invoices, delivery notes, customs declarations...
- Documentation from projects, batches, goods...
- HR records

Customer Benefits

- Accelerate query processing
- Improved documentation
- Validating invoices
- Cash discount application

People interested in MSE solutions

- Management, Owner (SMB)
- Customer Service
- Sales, Inside Sales
- Product management

Government Agency

It is no secret that government agencies have paper intensive processes, both, internal and external. There are almost endless cases where one can think of automating these processes. Besides free form recognition there are a lot of structured forms that need to be recognized. These agencies are often interested in decentralized capture. MFPs and desktop scanners come in handy here to build the necessary on-ramps for smooth electronic workflow.



Use Cases

- Automation of tender documentation
- Invoice recognition
- Fiscal authorities controlling documents
- Regulatory agencies managing claims
- HR documents
- Children Services
- Social Services

Customer Benefits

- Accelerated answering in queries from citizens
- Cost reduction
- Higher data quality for ongoing processes

People interested in Government Agency solutions

- Authorities and department head
- Mayor
- Knowledge worker



Finance

The finance industry is highly regulated, where many rules and regulations are in place for documenting and finding information. A back office automation solution that helps to recognize documents and business critical data, helps improve the efficiency in storing data to LOB applications.



There are a variety of documents that customers bring to the industry from the outside. There is also the need to capture these documents within a business process. The amount of forms is decreasing in this industry, but still can be a topic of discussion.

Use Cases

- Automatic capturing of customer documents when opening a new account (customer onboarding)
- Document capture during claims processing in insurance companies
- Automating tax documentation
- Loans processing
- HR documents

Customer Benefits

- Improved customer service
- Increasing new business and customer base
- Better prepared for competitive online offerings

People interested in Finance

- Management, Owner (SMB)
- Accounting
- Sales Management

Recruiters / Personnel Management

Staff and personnel are the focus of these industries. Document intensive processes include employment applications, medical insurance, and documentation of work accidents and claims.

This industry is often challenged by documenting employee time with time sheets. Reading these sheets and extracting the needed data for invoicing the customers is labor intensive.



Automating or accelerating this process means faster invoicing of the customer and faster payment to the company.

Use Cases

- Staff on- /off boarding
- Documenting certificates, qualifications, driving licenses, IDs, etc...
- Tax documents
- Time sheets and service confirmations

Customer Benefits

- Easier staff administration
- Improved legal certainty
- Faster invoicing

People interested in Recruiting

- Management, Owner (SMB)
- Customer Service
- Sales
- HR department

Healthcare/Pharma

In this industry all processes have to be documented without interruption. Paper is often the first choice for documentation media. Automating this area will help release budget and free up staff for patient care.



Use Cases

- Documentation of treatments
- Processing incoming / outside patient information and records
- Patient encounter forms
- Medical reimbursement claims
- HR documentation
- Service delivery

Customer Benefits

- Reducing administrative workload from a variety of departments
- Faster communication with external parties like other hospitals, doctors, insurers, payers
- Faster invoicing via insurance

People interested in Healthcare/Pharma solutions

- Management
- Administration
- Department Heads

Logistics

Transport & Logistics companies are heavily reliant on documents. These documents have to be checked for signatures, transport documents matched to deliveries, and invoices associated with bills of lading. This industry calls for decentralized solutions in particular, like Ephesoft SnapDoc for Smartphones and Tablets.



Use Cases

- Reading and evaluating delivery documentation
- Customs reporting and communication with agencies
- Claims processing with goods and vehicles
- HR documents

Customer Benefits

- Accelerated invoice recognition and processing
- Improved internal documentation with staff and car pool
- Accelerated processing of customs documentation

People interested in logistics documents

- Management, Owner (SMB)
- Customer Service
- Shared Services Director
- Accounting

About Ephesoft

Ephesoft, Inc. delivers our exclusive Smart Capture® intelligent capture technology on premise or in a SaaS model. With a focus on efficiency and reliability, Ephesoft has crafted the next generation of intelligent document capture in a simple and cost-effective application. Ephesoft's use of open standards and web-based software offers flexibility and accessibility for a wide range of customers.

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