

eBook

# Ready for Digital Intelligence?

How AI-based Technologies Expand  
the Value of Software Products

**ABBYY**

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# Introduction

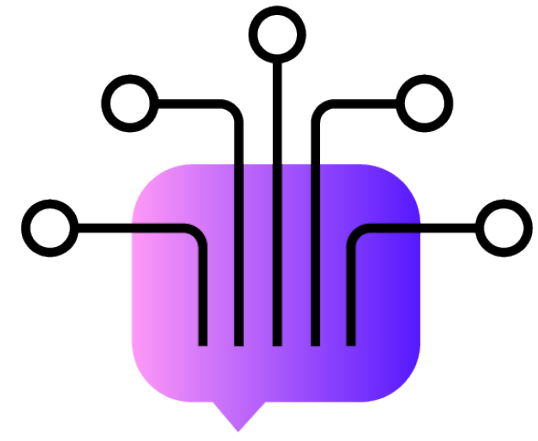
New global market trends, growing competition, increased complexity of business processes, and an ever-growing flow of information is forcing organizations to move fast. These days, most business processes are supported by integrated software solutions that enable process automation, allow for effective decision-making, and help increase work efficiency.

Implementation of new technologies and the exponential growth of mobile internet connections, together with broad adoption of cloud computing services, offers companies fast access to information and opens new ways of conducting business.

The ability to access, understand, and smartly use business information is now more important than ever.

Learn what additional value your software application can provide to your customers in this knowledge-based economy.





# The search is over. Searchable PDFs found in just a fraction of the time.

## How to find the right document

And even more important—how to detect information. In companies, most documents are scanned and stored in information management systems or photographed and sent directly to workflows. However, this step alone does not allow for accessing the required information. Only after converting the document images into searchable PDF or PDF/A formats does detecting the right information within extensive documents become easy.

When you integrate OCR, PDF, and document conversion functionalities, users of your applications can simply type relevant keywords into the search field

and the right documents or even individual pages will be immediately displayed.

## Beyond just information management...

Providers offering software for visually impaired people, applications for lawyers, governmental institutions, financial companies, and the healthcare sector can add significant value to their products by integrating text recognition technologies.

Similarly, vendors of high-speed scanners, electronic kiosks, and highly complex industrial machine vision systems can extend the functionality of their systems by integrating high-accuracy OCR.



# Head into the cloud. Follow your customers.

Are your enterprise clients moving their systems into the cloud? Cloud-based text extraction, document conversion, and data capture services can offer your customers great advantages:

- 1 Fast results any time:** The highly scalable cloud-based processing suits customers such as accountants or auditors who might encounter varying document processing needs or who need to conduct large conversion projects quickly.

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- 2 Freeing investment capital:** Bypassing investments into expensive IT infrastructure in combination with comfortable payments only for processed documents allows you to optimize financial resources.

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- 3 Worry-free work:** No worrying about processing computers' speed or their maintenance allows you to focus on the most important thing—your business.

The advantage for you? As a software provider, you can easily integrate the cloud-based conversion and data capture services in many different applications.

“At this point, cloud adoption is mainstream.”

↳ Sid Nag, Research Vice President at Gartner.

Source: [www.gartner.com](http://www.gartner.com)

# In the right place. Automated data capture.

With smart data capture technology, you can eliminate time-consuming manual data entry. Enhance your software with functionality for the automated transfer of key data from surveys, questionnaires, or exams directly into your programs, databases, or workflows—and save your clients precious time.

In documents such as applications, invoices, ID cards, receipts, business cards, tax related documents, contracts, or letters, AI-based technologies will quickly detect relevant information—even within a complex layout.

**Did you know?** In modern production companies, machine vision systems with data capture functionalities automatically check contents of labels, computer screens, and infotainment systems.

**Hand-printed and machine-printed text.** OCR and ICR technologies enable automated extraction of data entered by hand in forms or applications as well as machine-printed text.

**Optical marks.** OMR technologies retrieve results from surveys and exam sheets where the answer is marked with a cross or a check mark.





## On the go. Mobile data capture.

With tablets and smartphones—who needs a scanner anymore?

Thanks to mobile document capture and processing technologies, smartphone and tablet users are no longer bound to the scanner hardware in their office.

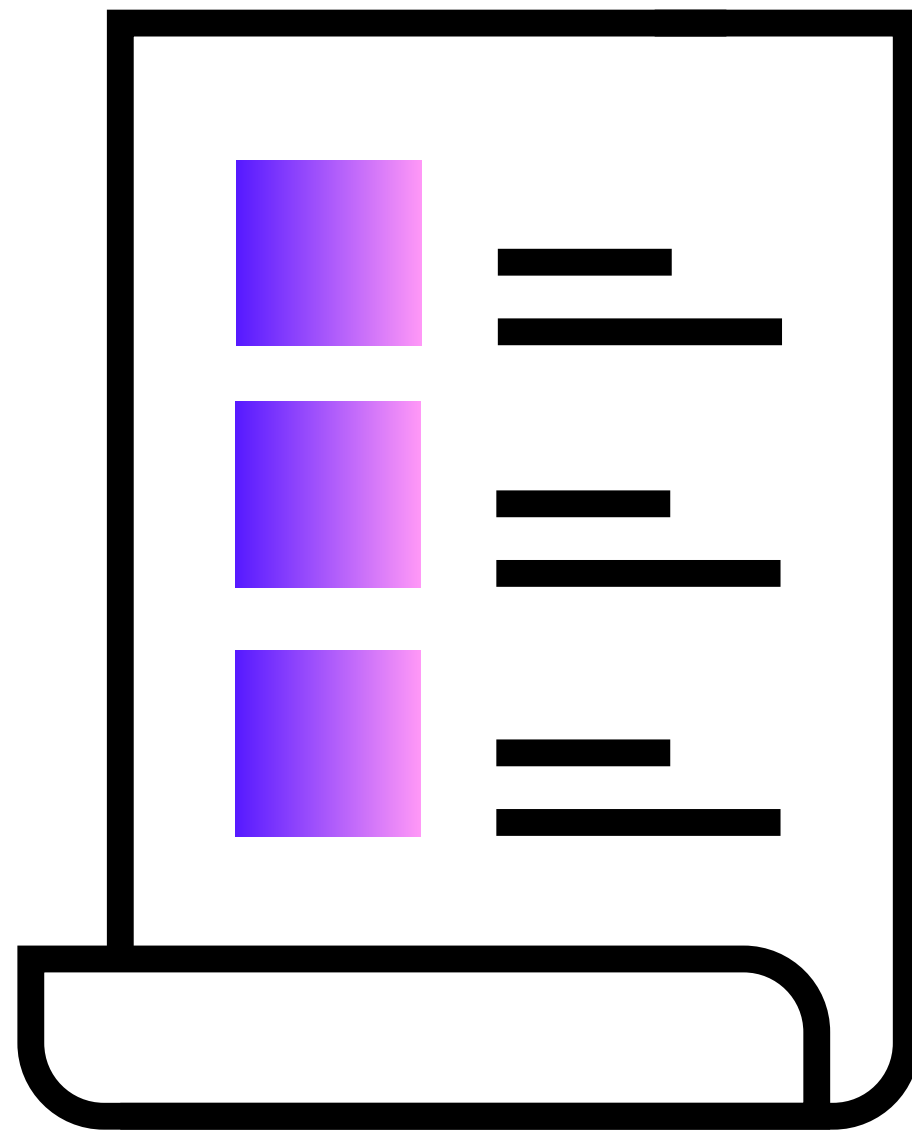
By photographing documents—or only pointing the camera on the text area—requested information can be extracted directly on the device.

For more complex processing tasks, documents photographed with a smartphone can be sent to the server in the data center or to the cloud. Sophisticated algorithms in both the smartphone client and the server software assure that photos can be processed by OCR and data captured with the highest accuracy.



# True or false?

## Ensuring document integrity.



Is the content of the contract printout the same as in the original PDF—or are there differences? The bank requested a pay slip copy for a mortgage deal. Does it match its original—or was it manipulated? A pharmacy is processing a medicine prescription—does it contain all the requested data or is any key data missing?

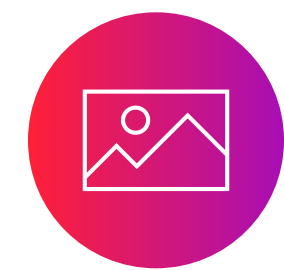
Applications that prove the integrity of documents can benefit from OCR and data extraction technologies. Content from various document versions can be compared and the differences detected, for example, the Microsoft® Word original, the created PDF, and the paper document that was sent back by the customer.

Also, individual documents can be checked for their integrity or completeness. By extracting fields of a medicine prescription or a pay slip, the received data can be automatically checked against information in databases to assure their credibility and completeness.

# From chaos to clarity. Automated document classification.

Intelligent document classification will enhance your software application and save time for its users. It enables automated document routing directly into relevant workflows according to the detected document classes and sorting mixed documents into pre-defined categories.

How? By integrating sophisticated technologies based on artificial intelligence into your software product, IT systems can recognize the right document type “at a glance.”



## Image-based classification

Classification algorithms based on visual appearance of the image utilize convolutional neural networks and quickly distinguish documents that are visually different.



## Text-based classification

Classification algorithms based on textual content of the documents rely on a highly accurate OCR process followed by statistical and semantic text analysis.

↳ Combination of both approaches delivers outstanding document classification results.



What next steps  
will your customers'  
documents take?

Your software decides.

# Discover the unknown. Adding Process Intelligence.

Which processes are fast and efficient—and which ones are slowing your business down?

How efficient is a certain way of performing a business task compared to an alternative approach?

Can I gain insight into all business processes, even if they are not standardized or documented, or were performed only once?

With a Process Intelligence platform, you can untap the information invisibly contained within the systems supporting your clients' business and create visual models of their enterprise processes. This insight allows them to identify bottlenecks—and even predict the future business impact of possible changes.

Detecting and automatically analyzing processes conducts the first step towards enormous cost savings through process optimization. Moreover, it opens the door to the next cost-saving steps—introduction of robotic process automation and business process management.

Intelligent process discovery bundles data from many sources to provide your enterprise customers with deep insights into hidden process information.



# Digital Intelligence

There are many ways to expand the value of your software products with modern data and document processing, artificial intelligence, and semantic, linguistic, and business process intelligence technologies.

With ABBYY technologies and software development kits, this task is made easy. Visit our website, give us a call, or send us an e-mail to discuss your project. Ask us about our broad product portfolio or book our professional consultancy to speed up your development and make your customers happy.

↳ [www.abbyy.com/for-developers](http://www.abbyy.com/for-developers)







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