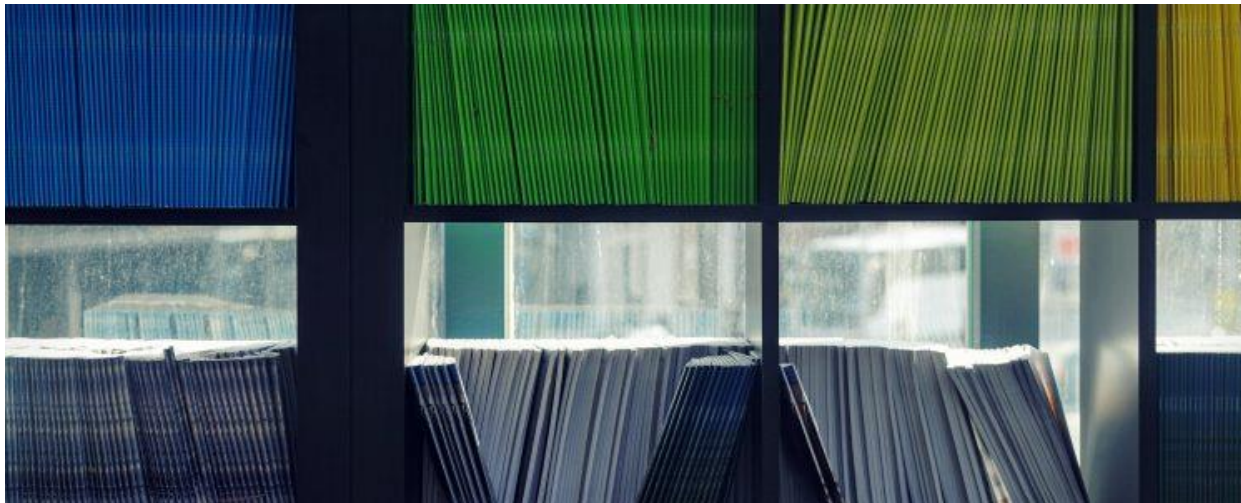# What is intelligent document processing?
An overview with examples

No matter what industry you operate in, you'll need to manage various documents. Spreadsheets need updating, email attachments need extracting, PDFs need converting, and so on ad infinitum.

This kind of document admin is needed for smooth operations. But it's also a clunky, time-consuming element of anyone's daily tasks.

Until now, with the advent of IDP – intelligent document processing.

So, what exactly is intelligent document processing? Here's an overview complete with useful examples.

What is intelligent document processing?

Intelligent document processing (IDP) is a form of data extraction and transformation that can handle semi-structured and [unstructured data](#).

Specifically, it allows a computer to recognize and extract valuable information from all sorts of documents. For example:

- Word/PDF/Excel files
- Emails
- Webforms
- Scanned forms
- And so on

Once extracted, IDP can transform the previously unstructured data into the desired format for further use and processing.

This process is patently useful just as a standalone service. However, intelligent document processing is also commonly [integrated into other technologies](#) employed to automate a broader mix of business tasks.

N.B. Intelligent document processing is also known as cognitive data processing, intelligent data capture, intelligent document capture, and cognitive document processing.

Why use intelligent document processing technology?

So, what's to gain from using intelligent document processing?

Any business collects and creates various documents, in volume. IDP translates to increased accuracy and efficiency/speed of data processing from these documents. This increased speed also means reduced operational costs.

Additionally, intelligent document processing provides a way to organize semi/unstructured data. So, you get a better view of how things are running. In turn, you unlock more value from your documented data.

How does IDP work? The tech

There are two ways to address the inner workings of intelligent document processing. The first is to look at the technology behind it.

IDP makes use of:

- Artificial intelligence (namely machine learning and natural language processing)
- Optical character recognition/intelligent character recognition
- Computer vision

Let's look more closely at these technologies.

- Artificial intelligence

Artificial intelligence (AI) covers a wide range of technological abilities, including machine learning (ML) and natural language processing (NLP)

In intelligent document processing, these AI-powered functionalities are what allows the computer to 'read' the documents and identify what data counts as valuable/ what data needs to be extracted.

- Optical character recognition/intelligent character recognition and computer vision

Character recognition technology is all about converting images of text. Say, from a scanned document, into readable computer text. This, coupled with computer vision technology, is what allows IDP to 'see' and start to 'understand' the documents it processes.

N.B. Intelligent document processing is often confused with character recognition technology. However, while intelligent document processing uses OCR, it is also able to take the results and classify the documents. On top, it can extract and transform data into a usable state. It can even then load data into the correct automated workflows for further processing.

How does IDP work? The process

The other way to understand how intelligent document processing works is to look at the process the data undergoes.

Step one is [collection](#). This is where the documents to be processed are gathered.

Step two is pre-processing. This is where the documents are adapted to aid with data extraction — be it to facilitate computer vision or improve understanding of the document.

Step three is classification. This is where documents are classified based on type, purpose, or other pre-defined parameters.

Step four is [extraction](#). This is where the documents are read by the system, and the valuable data gets extracted from the documents.

Step five is processing/transformation. This is where the extracted data is processed and transformed into the desired format.

Step six is loading. This is where the transformed, processed data gets loaded into targeted systems or other apps for further use.

Uses and examples

Here are just a few examples of what intelligent document processing can do, ordered by industry.

• Healthcare: IDP for medical forms and patient records

Intelligent document processing would allow for details from test reports, medical forms etc. to be automatically extracted from documents. Then, those details can be uploaded to a centralized resource with role-based access rights. This means that the right people would have easy access to important patient information. Information, that is, that may otherwise be lost in documents at other locations.

• Customer management: risk profiling

Customer-led reports, customer feedback, and customer communications all come in different forms. Intelligent document processing comes in handy here too. It can extract the important information from customer surveys and feedback, for instance. From there, it can use the 'intelligent' part to perform analysis and [assign scores](#), letting you know which customers are happy, and which aren't.

• Admin: report management and customs documents management

You can use IDP to create smart reports that collect and combine data from annual reports and other documents. So, there's less to read to get the information you need.

This can also apply to customs document management. Anyone who deals with customs knows that international business brings a whole host of documents to manage. With IDP, these documents get digitized quickly and efficiently. Key data points get automatically extracted and loaded to the right places for customers and businesses to access as required.

• Hiring: CV and application processing

It's the same information, but it comes in all sorts of different forms — application style forms, personalized CVs, letters, [PDFs](#), Word documents. Physical and digital. That's a mess of documents to sort through to find your next hire.

Intelligent document processing will standardize all that information for you. It will extract the key information from documents and load it where you want — be it a database table, a cloud folder, etc. Better yet, your data is then ready to trigger more automated processes.

Because there are lots of documents in business, regardless of industry, intelligent document processing has the potential to do a lot. As such, the examples could keep going.

But to summarize, anywhere you have important information coming from multiple documents, IDP can streamline the processing and workflows. (And unlock that valuable data.)

Intelligent document processing

Intelligent document processing isn't automation software. It isn't optical character recognition. But it combines the powers of these technologies — and more — to make document management that much easier.

So, is it time you applied IDP in your organization?