What is intelligent document processing (IDP)?

Introduction

Processing large amounts of business documents used to be a laborious and time-consuming task, requiring multiple full-time workers to extract and parse data from incoming documents. Fortunately, the invention of intelligent document processing (IDP) has streamlined routine tasks such as processing purchase orders.

Modern IDP software is now capable of handling millions of documents and can even go as far as making intelligent decisions and executing automated tasks based on the contents of the document.

What is intelligent document processing?

Intelligent document processing is technology that can extract and organise data from complex documents, and then execute automated actions based on that information.

IDP combines optical character recognition (OCR), natural language processing (NLP) and machine learning (ML) to automate document processing.

Traditional OCR solutions are only capable of extracting text from documents, whereas modern IDP software can understand the context of the document and make intelligent decisions on what automations to execute based on the type of document.

How does intelligent document processing work?

Intelligent document processing software uses a combination of systems to successfully and efficiently process documents. This mixture of OCR, NLP, machine learning and automation enables IDP software to extract information from a document, analyse it and decide on what automation to enact.

Optical Character Recognition (OCR)

Optical character recognition is technology that recognises and converts typed or handwritten text, or text found on imagery, into machine-encoded text that can be read and used by software.

Natural Language Processing (NLP)

Natural language processing is an off shoot of AI that uses machine learning to enable computers to understand and interact with human conversation. This allows software to take text inputs, process them and generate a text or speech reply that mimics natural human language.

Robotic Process Automation (RPA)

Robotic process automation is software that copies human interaction and inputs with computers and software. RPA tools can understand information on a screen, input keystrokes and navigate programmes to mimic repetitive business processes a human worker would carry out.

Benefits of intelligent document processing

There are many benefits to using intelligent document processing solutions. Here are just a few examples of how it can help your business:

- **Seamless scalability –** IDP software is capable of scaling with your needs, so whether you're processing hundreds of documents, or millions, the tool works just as efficiently.
- **Increased accuracy –** Software is predictable and produces the same outcome each time, no matter how much data is processed. Removing human error from the process improves data accuracy drastically.
- **Improved efficiency –** Automated software is much quicker at processing documents than a human worker, so large amounts of documents can be processed more efficiently.
- **Cheaper processing costs –** As you are only paying for an IDP tool, you don't need a large document processing workforce to collect your data, so costs are significantly reduced.

Best intelligent document processing software

There are hundreds of IDP software packages to choose from, with each programme doing certain things well and specialising in specific uses to fulfil a business need. Here are a few of the top intelligent document processing software providers you can find:

ThinkAutomation

ThinkAutomation IDP software uses 'If this, then that' logic rules to automate workflows and process business documents in any way a user wants.

For example, ThinkAutomation could take an email received from a regulatory body, scan it for compliance guidelines and then automatically update a compliance checklist with the new guidelines.

Google Cloud

Google Cloud offers an intelligent document processing platform that extracts, analyses, searches, and stores structured data from documents.

Pre-trained models are included for data extraction, document storage and search.

Amazon Web Services

Amazon Web Services (AWS) provides IDP functionality that uses OCR, computer vision, NLP, machine learning and generative AI to automate the processing of unstructured data.

AWS can extract, classify and summarise information from a document.

Intelligent document processing use cases

Intelligent document processing can be utilised in a variety of industries, with each sector having specific use cases. Here are some examples of how different industries use IDP software to streamline their processes:

Healthcare

The healthcare sector requires document processing to be highly accurate, with patient records and medical notes requiring extreme precision so that the correct treatments can be provided. IDP is used to:

- Convert physical patient records to digital
- Process private healthcare claims
- Accurately extract data from medical forms

Legal

Legal professionals are constantly working with high volumes of documents. With IDP software, they can:

- Analyse contracts quickly and summarise the contents
- Extract data from legal and court documents to help build their case
- Read a contract's terms and conditions to outline their obligations

Human Resources

Human resources departments and recruitment companies deal with a high volume of CVs and documents daily. With IDP they can:

- Extract important information from a candidate's CV and recommend top applicants
- Process payroll more efficiently
- Read a new employee's starter documents and add them to their new digital account

Finance

Finance departments are no strangers to large volumes of documents. Intelligent document processing tools allow them to:

- Automatically generate expense reports
- Process invoices and automatically pay them
- Read business receipts and file them automatically

The differences between IDP and OCR software

IDP is a natural evolution beyond the limited capabilities OCR has, building on the basics of what traditional OCR offers. Below are a few examples in which IDP and OCR software differ:

IDP	OCR
Extracts, analyses and processes data from documents, then executes automations	Converts written or typed text into digital text or code
Processes complex documents	Used for basic text extraction
Can be used in an end-to-end business automation to streamline processes	Limited to how it can be used in automations