ABBYY

ABBYY Content Intelligence for Robotic Process Automation

Turning Unstructured Content into Structured, Actionable Information

Robotic Process Automation (RPA) has become recognized as a transformative approach to automating business processes that once seemed unattainable due to cost, time, and lack of IT resources. Today, software robots can be quickly designed and deployed to automate mundane repetitive, structured tasks that staff would otherwise be responsible for, such as copying and pasting data between multiple applications.

As robotic automation increases, enterprises are looking for ways to expand the use of these digital workforce robots. A catalyst for rapid RPA adoption is a robot's ability to automate content centric processes involving images, documents, text, and email. However, the challenge is these types of content are often unstructured. Content needs to be transformed into meaningful structured information to be useful and integrated into a process.

The answer is simple. ABBYY Content Intelligence technologies and solutions turn unstructured content into structured, actionable information. It helps organizations around the world digitize their operations, dramatically improve the customer experience, greatly reduce operating costs and increase competitiveness.

Key Functionalities

- Automatically processes all types of documents from email, scanners, fax, and mobile.
- Leading OCR technology that supports 200+ languages, recognizes machine printed text, handprint, 1D and 2D barcodes, and checkmarks.
- Intelligently identifies, sorts, and separates documents using machine learning and AI-based technology.
- Automatically extracts data and insight from documents and images based on business logic and/or machine learning.
- Validation client for reviewing and approving data and processes.

Benefits to an RPA Solution

- Increase operational efficiency for your content centric processes.
- Automate the understanding of documents and transform data into actionable, electronic business information.
- Expand RPA usage to support strategic digital transformation initiatives across the enterprise.

Robotic Process Automation

RPA & Content intelligence: Connecting to Solve the Content Problem

When organizations combine Robotic Process Automation with content intelligence, the ability to automate a wider range of processes and deliver greater business value becomes reality.

RPA + Content Intelligence: Transforming Your Business
Unlock the value of content and digitize processes

Robotic Process Automation	Content Intelligence
Helps overcome system and process limitations	Provides understanding of content associated with the process
Non-invasively mimics users' activities	Mimics human thought process through vision, language, and pattern detection
Process structured data from systems, spreadsheets, documents	Process structured, semi-structured, and unstructured content
Automation is rules based	Supervised learning of documents, and improves over time based on human input
Highly deterministic	Applies learning, but can also have safeguards built in that involve humans
General employee assisted digital worker	Highly skilled digital worker with understanding of content

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Content Intelligence – Adding Value to RPA

Content intelligence benefits organizations at all levels of RPA – starting with the most basic automation robots all the way to designing robots that automate tasks involving more intuition, judgement, and problem solving.

ABBYY technology and solutions are complementary to all three digital classes of RPA. It applies OCR, machine learning, natural language processing (NLP), and text analytics technologies to identify and classify content, extract data, while continuously learning from human input.

Robotic Process Automation

3 levels of automation and impact on business value

TECHOLOGY: OCR, Machine Learning, Natural Language Processing, Cognitive

BASIC RPA

Robots used to extract and interpret existing applications for the purpose of automating rules-driven transactions.

CONTENT INTELLIGENCE: Digitize, Searchable Content, Screen Scraping

ENHANCED RPA

Robots are able to understand unstructured content and apply it to process automation.

CONTENT INTELLIGENCE: Digitize, Classify, Extract, Learn

COGNITIVE AUTOMATION

Robots automate tasks involving intuition, judgement or problem solving. Mimics human intelligence and judgement.

CONTENT INTELLIGENCE: Analyzing and understanding of text (sentiment, intent, relationships), continuously learning.
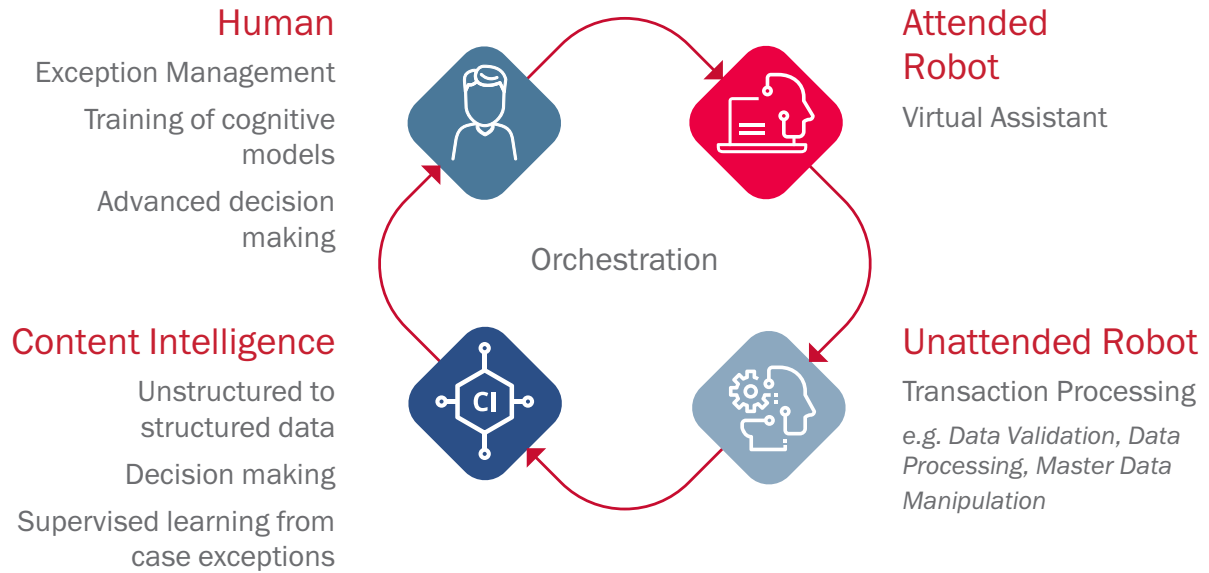
ABBYY Content Intelligence Technologies and Solutions

Making Robots Smarter with Content Intelligence

ABBYY Content Intelligence technologies and solutions are utilized in many ways with robots whether those robotic processes are supervised operations initiated by a front office worker, or automated back office tasks by an unattended robot. ABBYY solutions can be the start of any process where content is digitized, documents are classified, data is extracted, and validation is performed. The robot then follows by taking action based on the structured information the ABBYY solution delivers.

Similarly, ABBYY can be inserted as a step into a robotic process to provide deeper insight. With this option, a robot calls one or more of the ABBYY services – classification, and/or data extraction – and provides results that enable the robot to continue with the process. Staff can also participate in the validation and review of data that ABBYY solutions deliver to the robot.

Robotic Process Automation

Human

Exception Management

Training of cognitive models

Advanced decision making

Attended Robot

Virtual Assistant

Content Intelligence

Unstructured to structured data

Decision making

Supervised learning from case exceptions

Orchestration

Unattended Robot

Transaction Processing

e.g. Data Validation, Data Processing, Master Data Manipulation

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Notable Industry Use Case Examples

Organizations are identifying several business-critical processes for deploying RPA and automating content involving images, text, emails, and documents. By combining RPA and content intelligence, organizations achieve end-to-end automation for content centric processes, increase the digital workforce footprint, and support the organization's digital transformation initiative.

The following industries illustrate common use cases where a robot excels at leveraging content intelligence to automate a wide-array of content centric processes:

Finance & Accounting	Logistics	Financial Services	Insurance
Invoices	Customs Declarations	Mortgage Lending	Claims
Purchase Orders	Proof of Delivery	Account Opening	Policy Administration
Sales Orders	Bills of Lading	Customer Onboarding	Customer Onboarding
	Reports	Trade Confirmation	Account Opening

Robotic Process Automation

Content Intelligence Product Offerings for RPA

ABBYY FineReader – Available as a desktop and server-based application and SDK, FineReader is an all-in-one OCR and PDF software application. It makes robots smarter by converting content (documents, images and PDFs) into digitized information for robots to process.

ABBYY FlexiCapture – Add intelligence to robotic business processes, by intelligently classifying and extracting data from structured, semi-structured, and unstructured content.

ABBYY FlexiCapture for Invoices – A business-ready solution for automating the capture of invoice data. It enables organizations to dramatically increase the productivity of accounts payable processes, while lowering cost.

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