

RPA + AI = COMPETITIVE EDGE

Robotic Process Automation (RPA) is already transforming entire industries.

But when combined with the latest Artificial Intelligence (AI) innovations, it gives businesses a true competitive edge.

EXECUTIVE OVERVIEW

First came the bots—software robots created using Robotic Process Automation (RPA) tools to execute defined tasks. These bots have made a big impact by increase efficiency, productivity, and profitability across all industries globally.

 81%

of enterprises are taking RPA “seriously”

 53%

are taking it “very seriously”

Source: https://www.horsesforsources.com/RPAglobal2000_031118.

Today, RPA is no longer limited to predefined tasks and data. AI-based “smart bots” are capable of handling ambiguity and make decisions similar to their human counterparts.

This eBook explains what makes these smart bots—called cognitive bots—so valuable. You’ll discover unprecedented ways cognitive bots can help your business.

AI MEETS RPA

Where does RPA intersect with AI? In the hotbed of emerging AI technologies—where you'll find speech and facial recognition, neural networks, and deep learning to mention a few—RPA meets AI in cognitive computing.

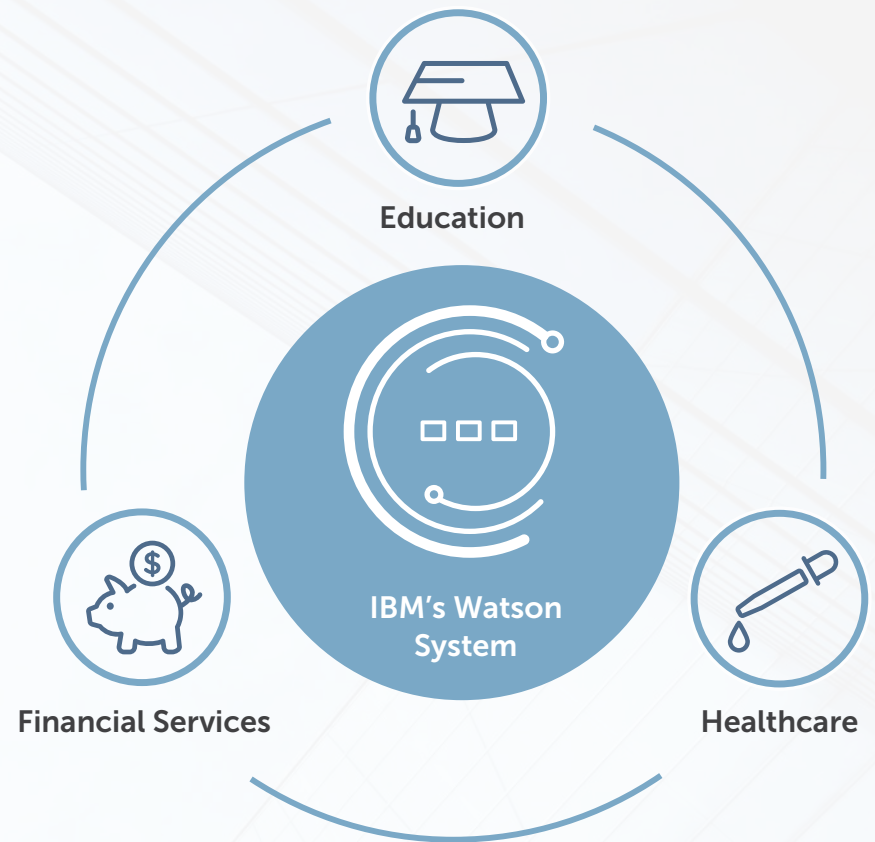
Cognitive computing enables a machine to infer, reason, and learn in a way that emulates the way humans do those things. Cognitive computing does this by absorbing data from both structured and unstructured sources, and through experiences and interactions with both humans and other machines.

When you combine RPA with cognitive computing, cognitive bots are created. Cognitive computing frees bots from the limits of structured predefined data and tasks. Cognitive bots are able to reason and make decisions, quickly learning to become key assets in your human+Digital Workforce talent pool.

Case in point:

One of the first demonstrations of AI's potential was IBM's Watson. In 2011, Watson famously competed on Jeopardy against the show's legendary champions. The result? Watson won first prize and took home \$1 million USD.

Today, Watson helps solve complex issues in healthcare, education, financial services, and other industries.



WHY RPA NEEDS AI

Despite RPA's achievements and growth, bots can only do what you have trained them to do. Their inflexibility and inability to learn has constrained RPA in two ways:

- **Bots can only process structured data.** Data must be clean and presented in standardized and easily recognized formats, such as spreadsheets, databases, or application programming interfaces (APIs).
- **Bots have no ability to judge ambiguous situations.** Conventional RPA bots can handle simple decisions that were given to them via strict rules about specific scenarios. But they struggle when the scenario is more complex.

For example, you can tell a bot that any purchase order (P.O.) over \$100,000 must be routed to the vice president of procurement for approval. But a conventional bot can't determine if that \$100,000 P.O. represents a good use of your company's money. Human judgment is required.

This is why **cognitive bots are needed. And they are finally here.**



Case in point:

Global banks are planning to use cognitive automation to track customers' and counterparties' financial activities to detect early warning signals of suspicious behavior. By sifting through enormous piles of data from a wide variety of systems—including unstructured sources, such as email, audio files, or even video—AI-based bots can recognize patterns and make comparisons and inferences. This allows banks to spot anomalies in customer activities much faster and more accurately than humans ever could.

AUTOMATION FOR THE REAL WORLD

Because cognitive RPA is capable of analyzing unstructured and structured data—as well as making business decisions—its value goes well beyond simply automating basic business process automation.

THE 4 ADVANTAGES OF COGNITIVE AUTOMATION

Automation Anywhere leverages AI and machine learning—another technology subset of AI—to process information without the need for sensitive data to leave the enterprise. This AI-based offering makes bots smarter in four distinct ways:



1
Make sense
of documents
no matter the format



2
Capable of
automating in a
virtual environment



3
Versatile and robust
when faced with
changing situations



4
Able to
create other bots


COGNITIVE BOTS CAN UNDERSTAND VARIOUS FORMATS OF DOCUMENTS

Conventional RPA bots are very efficient at handling data in standardized formats. Like a single spreadsheet. But businesses deal with information of all types. Take something as simple as processing invoices from customers. Such documents come in all sorts of shapes and styles. Creating a bot for each format would be inefficient, time-consuming, and ultimately pointless.

Cognitive bots can easily analyze, classify, and process data regardless of the format—invoices, health records, insurance claims, financial documents and more.



Cognitive bots with language (spell checker, translation and sentiment analysis), speech (speech-to-text and speech-recognition capabilities) and even video skills (enabling computer vision and face recognition) take automation a step further. Using some—or all—of these capabilities allows you to automate complex processes and drive business value.

Cognitive Automation




Digitize Data from Nota Fiscal (using IQ Bot)

Application: Automation Anywhere





Cognitive Automation



Digitize Data from Standard Settlement Instructions (using IQ Bot)

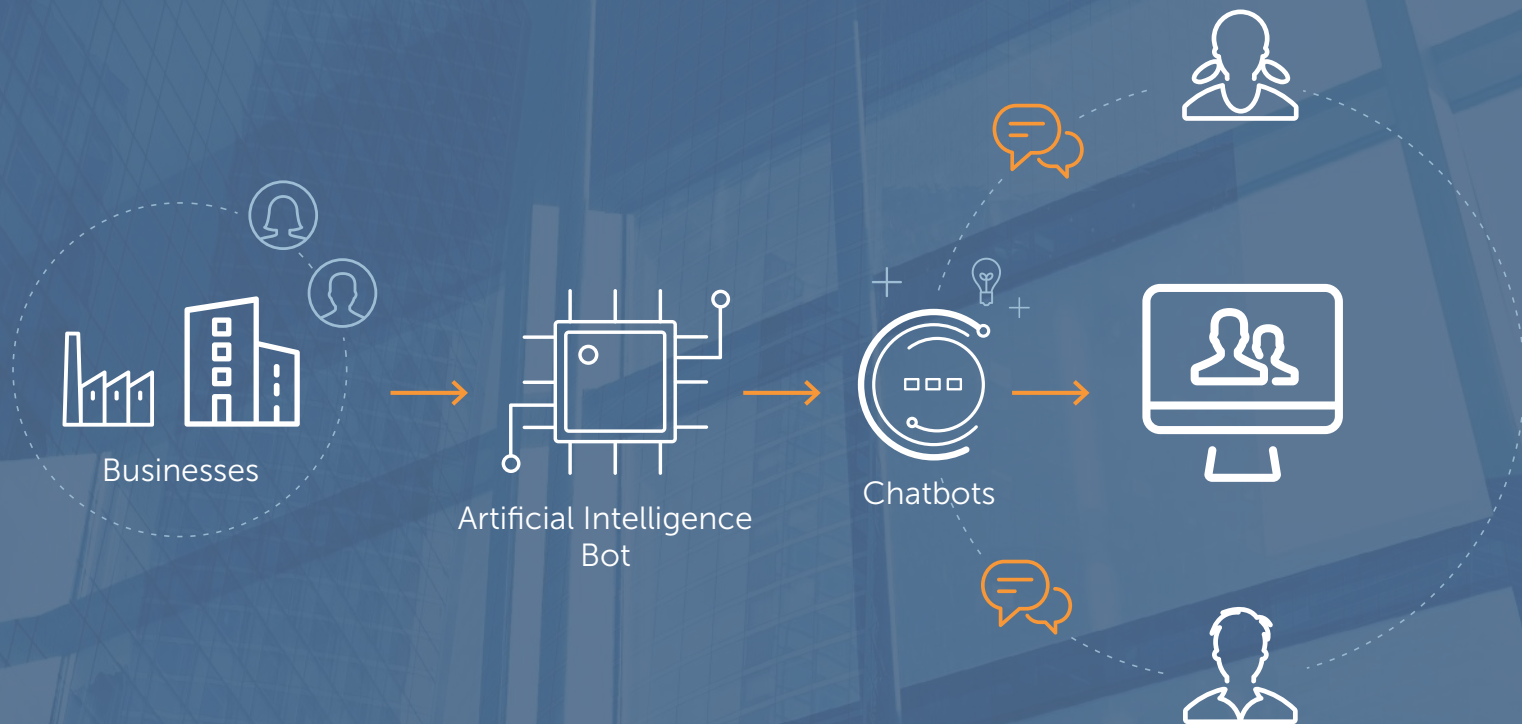
Application: Automation Anywhere



Predesigned, cognitive bots are readily available via the Automation Anywhere [Bot Store](#).

Case in point:

More and more businesses want to offer highly personalized experiences to their customers. Cognitive chatbots are a popular way to do this, by engaging users and improving brand image through human-like conversations. Cognitive intelligent bots with voice and language skills allow you to create chatbots that are on-brand, capable of learning from interactions with customers, and can handle any complex situations that come their way.



AUTOMATE IN VIRTUAL ENVIRONMENTS

Most enterprises today deploy virtual machines (VMs) in their IT environments. Automating applications that reside on VMs is challenging because the application is exposed as an image, but it doesn't give bots access to the underlying user interface (UI) objects.

Leading cognitive RPA platforms, like [Automation Anywhere Enterprise](#), can automate at the object level rather than at the surface image level. Enterprise achieves this with its AISense feature, which uses computer vision, natural-language processing, and machine-learning to achieve intelligent image recognition for Citrix, Delphi, Flex, and other remote desktop environments.

[In a recently published whitepaper](#), PwC highlighted what makes Automation Anywhere Enterprise the best solution for automating applications hosted on Citrix and other virtual environments.



ADAPT TO CHANGE

One of the most exciting capabilities of AI-based cognitive bots is that they can adjust, learn, and change spontaneously based on environmental factors. Because they are so highly resilient, they can easily identify changes in underlying applications and continue business-critical operations without disruption.

For example, when the user interface of an application changes—say customer contact data now belongs in the third field instead of the first—cognitive bots don't need to be told. They sense the change on their own and adjust accordingly. And AI-based machine-learning algorithms enable these smart bots to learn from human intervention and get faster and smarter with each use.

In short, your cognitive RPA automated processes won't break because of routine adjustments made to underlying business applications.



BOTS BUILDING BOTS

The best cognitive RPA solutions empower their bots to identify tasks to automate and create bots automatically to replicate those tasks.

Fear not! Bots are still far from creating their own armies to take over the human race. But what cognitive bots can do is analyze processes, recognize inefficiencies and create bots to increase productivity and quality.

WHAT PROCESSES SHOULD I AUTOMATE?

How are your business processes working? Process mining uses intelligent Big Data technology to analyze your processes. It leverages the digital footprint left behind by IT systems and provides complete transparency into how these processes work.

Are you losing productive hours due to unnecessary steps in your process? Would RPA help to speed up delivery and receipt of payment? Process mining provides these answers and more.

ANALYZE BUSINESS PROCESS

This bot enables you to integrate bot runtime data with your Process Mining analysis in Celonis.

Category: **Insights**

Last Updated: May 22, 2018

[Get Bot](#)

The image shows a bot card for 'Analyze Business Process'. It features a yellow header with the word 'Insights' in orange. Below the header is a circular icon containing a lightbulb with gears inside. The main title 'Analyze Business Process' is displayed in a dark grey font. At the bottom of the card, there is a horizontal line above the logos for 'A' (in orange) and 'celonis' (in blue).

ADD ANALYTICS TO THE MIX

Cognitive RPA puts businesses ahead of the curve by increasing the effectiveness and reach of business process automation. To create step-change, the next critical ingredient is analytics. But not your basic, standard analytics comparing this month's sales to last month's.

Look ahead. Automation Anywhere Enterprise Bot Insight™ transforms historical information into future-looking analysis. Predictive analytics sets Automation Anywhere Enterprise apart by effectively analyzing at scale all transactional and historical data using machine learning. Bot Insight gives you easy and automatic visualizations of your data.



Case in point

Most enterprise software platforms today are [Big Data ready](#). By analyzing and learning from historical sales data over the past months or years, leading solutions like Automation Anywhere Enterprise's Bot Insight can predict future sales down to the individual SKU level, and discern patterns in those sales, so you never run out of stock during times of peak demand, and never over-order during low season.

AUTOMATION ANYWHERE: YOUR DIGITAL WORKFORCE ADVANTAGE

Automation Anywhere is the pioneer of the [Digital Workforce](#), offering a solution that integrates RPA, cognitive capabilities, and analytics to provide you with a complete automation solution.

By closing the current obvious gap in the marketplace, Automation Anywhere provides you with AI-powered automation for even your most business-critical and complex processes.

TreasuryONE is a partner of Automation Anywhere in South Africa that scope, implement and support your automation processes. [Request a demo](#)

