# INTRODUCTION TO INTELLIGENT AUTOMATION

Intelligent Automation (IA) refers to the smart technologies that elevate business processes automation (BPA) by introducing Artificial Intelligence into operational workflows and processes end-to-end.

Intelligent Automation is different to traditional process [automation systems](#) in two ways:

1. Intelligent Automation is focused on the entire process workflows end-to-end and not limited to automating individual repetitive tasks in the process chain.
2. Intelligent Automation technologies infer the circumstances and make data-driven decisions with respect to automating a process.

Let's take a look at intelligent automation, including examples, components, and steps for introducing IA in the enterprise.
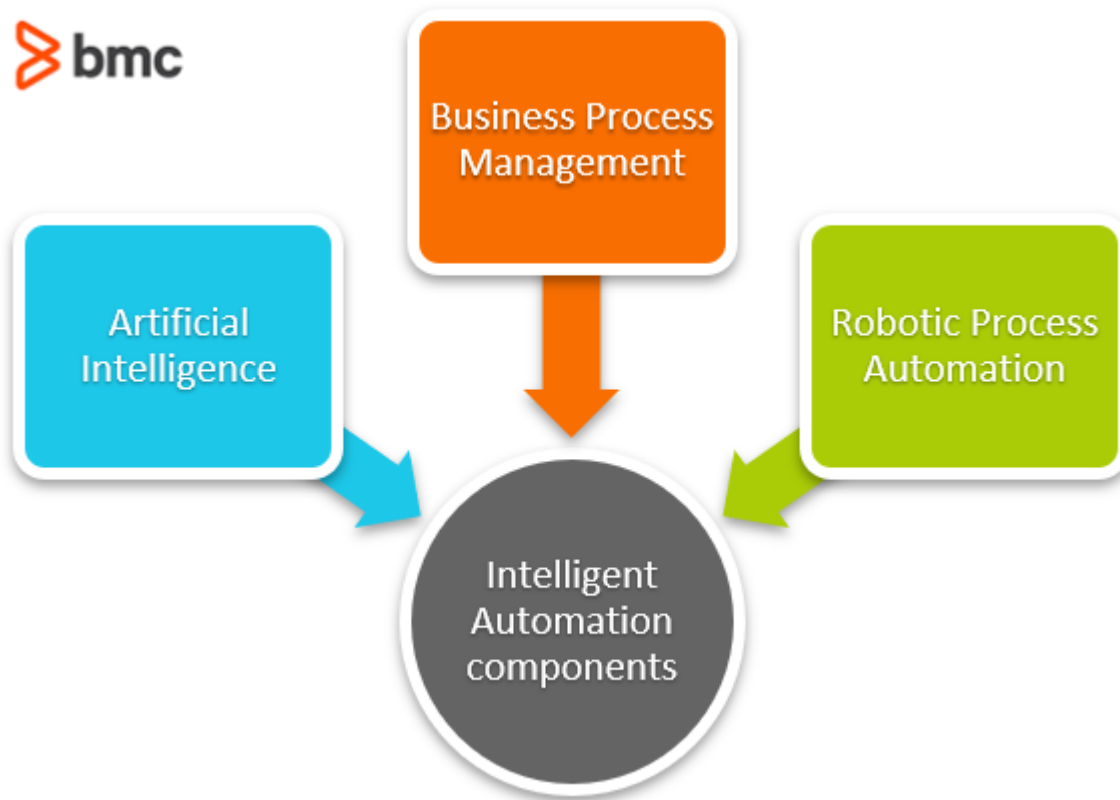
Intelligent automation example

Consider a simple case example. Imagine that your IT network is equipped with an Identity and Access Management (IAM) system that reviews and classifies network access requests as authorized or unauthorized.

One day the IAM system observes a disproportionately large amount of access requests from globally distributed IP address locations. While all seem to be correct login details and should be authorized, the pattern also identifies potential cyberattack attempts.

While the traditional process automation system would allow all network connection requests as long as the access credentials are validated, the Intelligent Automation solution would analyze the pattern of requests and historical network access trends. The Intelligent Automation solution would quickly identify the anomalous behavior as a potential Distributed Denial of Service (DDoS) attack or a loophole in network configurations that is routing all traffic through a single access terminal.

Components of Intelligent Automation

To deliver intelligence across the end-to-end decision-making process, a good Intelligent Automation (IA) solution integrates:

- Artificial Intelligence (AI)
- Business Process Management (BPM)
- Robotic Process Automation (RPA)

Together, these capabilities accelerate the digital transformation capacity of your organization. So, let's briefly describe these three components:

Artificial Intelligence

Intelligent Automation driven by data that contains hidden insights about the wider business process. AI algorithms analyze vast volumes of structured and unstructured data to identify anomalies proactively. The data streams are used to:

- Continuously test the current state of business operations
- Predict future scenarios

AI algorithms also account for a large set of dynamic parameters that should affect the decision of an automation technology to perform a task based on the current business process state.

(Deepen your understanding of AI.)

Business Process Management

The systems used to automate business process workflows. The discipline of BPM involves the use of various technologies and methods to model, analyze, and optimize business processes. BPM integrates the behavior of systems and users to deliver outcomes that support business strategy.

BPM systems are highly data-driven, which makes it a suitable candidate to integrate AI capabilities that can model complex systems accurately.

(Compare business process management & automation.)

Robotic Process Automation

It is a component of the wider BPM chain that automates individual tasks in the BPM pipeline and interfaces with the backend systems from a Graphical User Interface (GUI). Traditionally the automation and backend interface would require manual scripting and dedicated Application Programming Interfaces (APIs).

RPA typically works as a task-centric rule-based automation across APIs and GUIs. In a complex business process pipeline, these individual tasks can be highly intertwined with a variety of business processes. In this context, isolated automation of highly dependent tasks offers limited improvements in productivity and often bottlenecks the BPM capability of the organization.

(Learn more about RPA.)

How to implement Intelligent Automation

So how do you transition from traditional Business Process Management and Robotic Process Automation to an AI-enabled Intelligent Automation platform?

The following framework can help you incorporate cognitive capabilities into your operational workflows and accelerate your digital transformation capacity.

1. Set the goal: new digital expectations

Value speed: users look for proactive value providers in the digital era. Focus IA investments on removing performance bottlenecks and identifying opportunities for productivity improvement. Simple lift and shift of automation technologies will not suffice.

Integrate IA systems into the support system for brainstorming issues and delivering value to end-users.

2. Prepare for a disruptive journey

1. Redefine your organizational structure and culture to prepare for IA-based value-driven user engagement business operations.
2. Recruit in-house experts to maximize the value potential of IA capabilities.
3. Develop IA systems that replicate human intelligence and behavior, especially for service management (ITSM) systems facing direct user interactions—like ticketing systems.

3. Innovate RPA with the right strategy

1. Start with a proof of concept.
2. Set the right expectations.
3. Focus your efforts to develop the right solutions. Only 30% of the time is spent on configuring the actual robot systems.
4. Gain complete stakeholder support and executive buy-in.
5. Develop a library of tools that will strengthen RPA implementation.
6. Automate small, iterative sets of tasks instead of automating complex RPA pipelines end-to-end.
7. Monitor results continuously.
8. Integrate the business and IT teams to maximize strategy alignment of RPA projects.
9. Develop sustainable solutions.

4. Partner with the back office for value

Your IT back-office should drive business value as it progresses through the Intelligent Automation maturity curve. Elevate and transform the back-office such that it can engage end-users and deliver value to business customers.

5. Execute, improve, reiterate

- Prepare for the future through continuous improvement.
- Experiment, monitor progress, gain user feedback, and iterate.
- Focus on the flexibility to change and improve in response to changing business requirements.

These guidelines can help you get started with Intelligent Automation initiatives in the right direction: highly focused on business value, delivering positive end-user engagement and reducing waste processes.

Related reading

- BMC AIOps Blog
- BMC Machine Learning & Big Data Blog
- IT Automation vs Orchestration: What's The Difference?
- What Is AISM? AI Service Management Explained
- What are Service Orchestration and Automation Platforms (SOAPs)?

- [Gartner Market Guide for AIOps Platforms](#)