



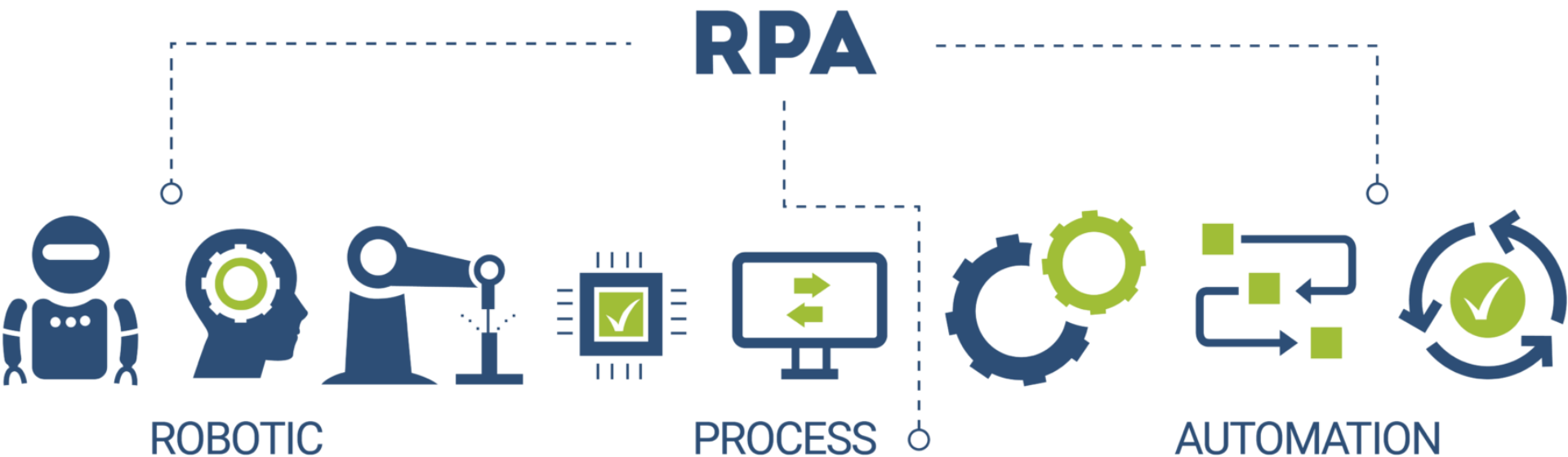
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ROBOTIC PROCESS AUTOMATION (RPA)





- Digital Robot
- Automate process
- Replace users

RPA

- Robotic process automation (RPA) tools perform "if, then, else" statements on structured data, typically using a combination of user interface (UI) interactions or by connecting to APIs to drive client servers, mainframes or HTML code.
- An RPA tool operates by mapping a process in the RPA tool language for the software "robot" to follow, with runtime allocated to execute the script by a control dashboard.

Gartner



RPA

- Is an application of technology, governed by business logic and structured inputs, aimed at automating business processes.
- Using RPA tools, a company can configure software, or a “robot,” to capture and interpret applications for processing a transaction, manipulating data, triggering responses, and communicating with other digital systems.
- RPA scenarios range from generating an automatic response to an email to deploying thousands of bots, each programmed to automate jobs in an ERP system.

CIO

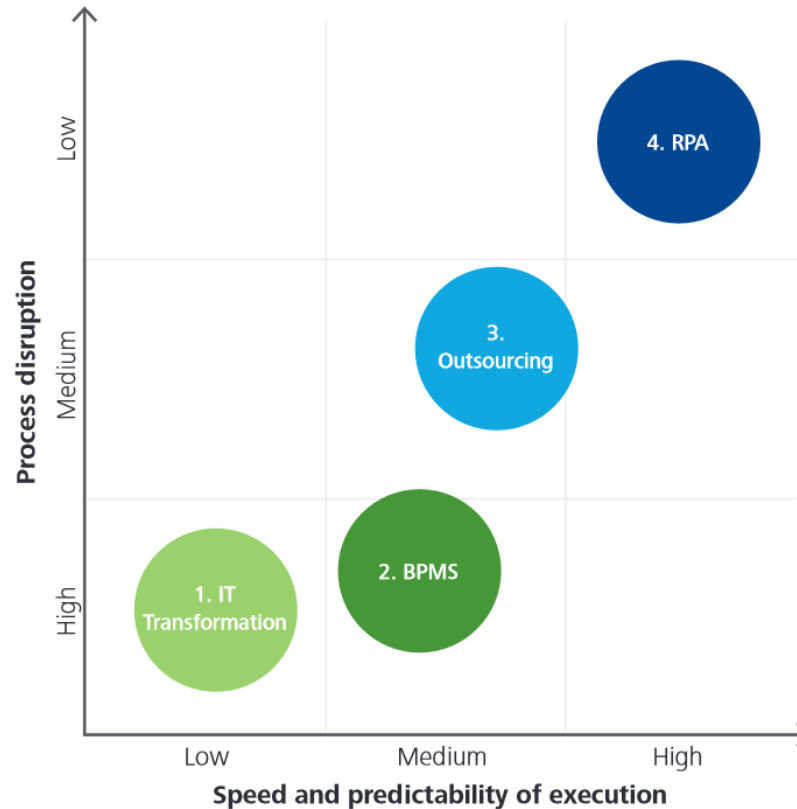
RPA

- As an emerging technology that refers to software that can be easily programmed to perform routine activities that are currently carried out by human workers, in a controlled, flexible and scalable way.

Deloitte

Process Transformation Approaches

Figure 1: RPA compared to traditional process transformation approaches



Source: Deloitte Analysis

Process Transformation Approaches

Figure 2 Magic Quadrant for Robotic Process Automation



Source: Gartner (July 2022)

What processes are suitable to deploy with RPA?

- Repetitive
- Susceptible to error
- Rules based
- Involve digital data
- Highly administrative.

Deloitte

Why Robotic Process Automation?

The benefits of RPA solutions go beyond cost reduction and include:

- Decreased cycle times and improved throughput
- Flexibility and scalability
- Improved accuracy
- Improved employee morale – enables them to add more value
- Allows time to innovate and focus on customer satisfaction
- 24/7 availability.

Deloitte



Productivity
and Efficiency



Advanced Analytics
and Security



Cost Savings



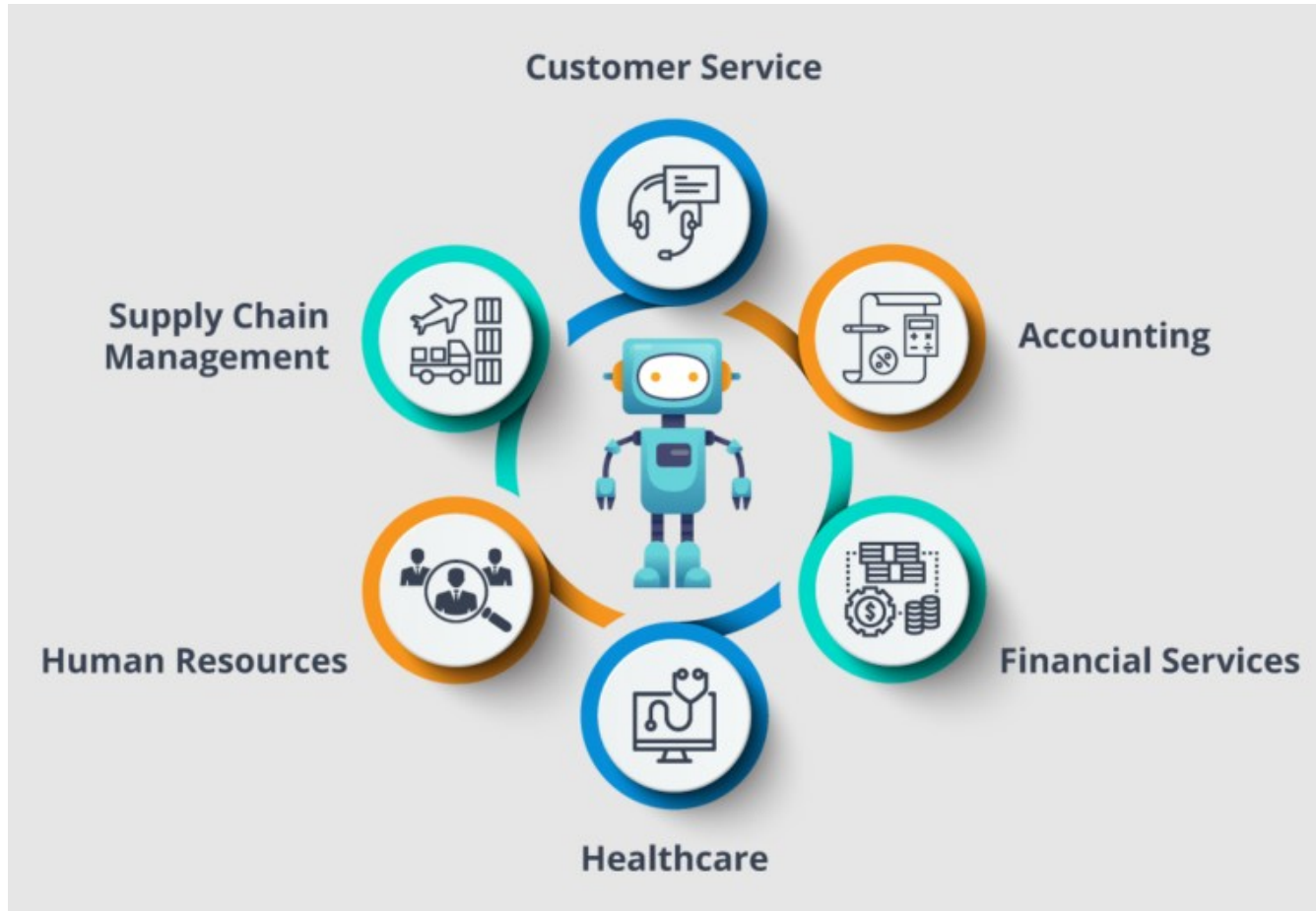
Scalability and
Flexibility



Accuracy and
Quality



Applications



<https://www.processmaker.com>

Applications

- **Banking** (e.g. Romão et al. 2019)
- **Finance** (e.g. Ortiz e Costa, 2020)
- **Auditing** (e.g. Calçada, 2020)
- **Invoice processing** (e.g. Oliveira, 2021)
- **Retail** (e.g. Oliveira, 2021)



Vendors



MS Power Automate



IBM Robotic Process Automation



SAP Process Automation



TruBot



Rocketbot



Other



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- Oliveira, A. R. A. (2021). *Utilização de robotic process automation para integração de processos de pagamentos* (Master Thesis, Instituto Superior de Economia e Gestão). ISEG, Ullisboa
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