



BUSINESS PROCESS AUTOMATION

An Emerging Trend




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Change is inevitable. What is 'new' today, may become 'old' tomorrow, and business or the corporate world is a perfect example of this phenomenon. With the ever increasing cut-throat competition among business entities, it is becoming more and more imperative for the business organizations to amend and alter their socio-economic infrastructure, re-plan strategical aspects, and most importantly, upgrade to new technologies and techniques to stay afloat.

Technology plays a very pivotal role in today's 'next gen' corporate world. Today Information Technology is at its best and business houses are using it to its fullest potential by integrating it into their day-to-day operations, which in turn is allowing them to serve their customers in a better way as well carrying out other functions of organization in a smooth and precise manner.

Latest technologies and software application are providing with state of the art software solutions besides contributing largely to the automation process of business operations in various areas.

The document focuses on the following points:

- What is Process Automation in Business (BPA)
- How it works
- Tools and software used in BPA
- What are the main techniques used in BPA and
- Usage of these techniques in modern business practices
- Technologies like RPA, CI, AI and Machine Learning
- Future of Business Process Automation

What is Business Process Automation? & How It Works?

Process Automation simply means to automate a process with the help of machines, so as to avoid or minimize manual interference while carrying out a particular task. But in business parlance, process automation or **BPA (Business Process Automation)** refers to using information technology and software engineering, to carry out various business activities with utmost efficiency and precision. It helps to simplify the way in which a particular business organization works by reducing human involvement to the minimum, and in many cases there is no human involvement at all.

BPA Includes

01

Integrating applications



02


Restructuring labor resources



03

Using software applications throughout the organization



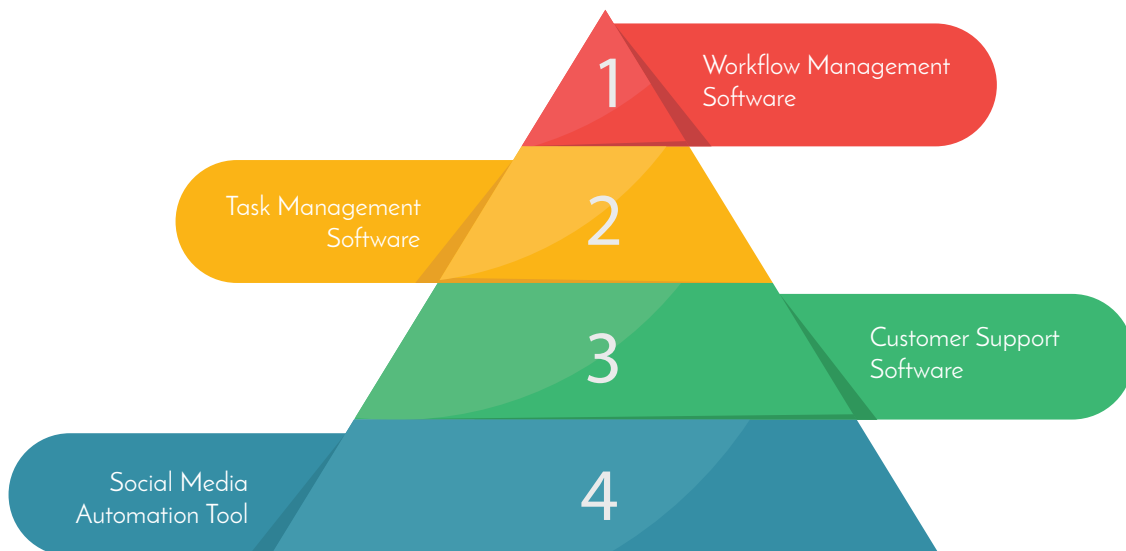


Business Process Automation is important because it reduces the percentage of human errors and increases the service quality as well as capacity to serve, of a business organization. It also provides the organizations added advantage by setting up clear-cut, step by step workflow solutions, thus assisting in accelerating the business process. New software technologies also helps the companies to congregate all the other IT resources and integrate them into one master unit so as to facilitate better control over business related processes. Moreover such kind of process automation results in increased compliance and enhanced productive outcomes, which again, provides the business and its clients with effective and action-oriented solutions to the issues concerned.

The ultimate goal of BPA is to save costs of the company, but at the same time to be more cost-effective.

Tools and Software used for Business Process Automation

Although there are no specific tool for BPA as the processes involved vary considerably from business to business, but here are few use-case examples for understanding purposes:



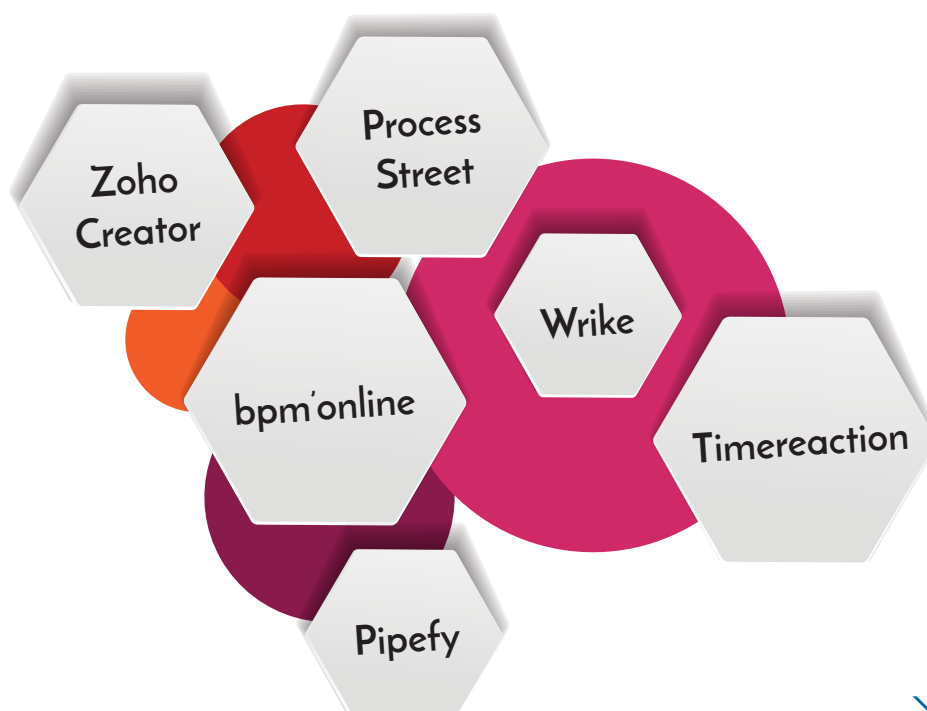
Workflow Management Software- Such kind of software helps in keeping track of all the business operations. It allows digitalizing the workflow, mainly the logistics part.

Task Management Software- This software acts as a dashboard for all the personnel working in the organization. It contains data about the tasks assigned to each and every employee, thus eliminating any sort of confusion or doubts regarding the work assigned.

Customer Support Software- Software such as intercom helps the Customer Care Executives to automate the replies, so as to serve and handle thousands of daily incoming complaints properly and to resolve the issues on time.

Social Media Automation Tool- Tools like Buffer allow you to schedule your social media posts throughout the day, week, or month depending on your preferences. There are also some websites that allow you to fully automate your social media activities at very affordable prices.

Some other popular BPA tools are:





BPA Techniques in Modern Day Business Practices

There are three main techniques used by the companies for implementing Business Process Automation into practice:

- 01. Extension of an existing IT system**
- 02. Purchasing a process-specific business process automation software**
- 03. Purchasing an adaptive business process automation solution**

The first technique implies the extension of an existing IT system. Since these IT systems are already automated, companies find it a lot easier and cost effective to integrate BPA solutions to these IT systems. This technique enables the automation to be specifically tailored according to the required environment of the organization. But the biggest drawback of this technique is that, the companies have to find suitable and talented professionals to develop such a system, which again can be costly affair as well as time consuming.

The second technique is to purchase readymade, specially-designed business process automation tools to carry out business operations. This way, companies don't need the help of IT professionals for developing BPA software programs. But here's a catch too, readymade software may not have those functionalities required by an organization to undertake a particular task.

The last technique has the best elements of its predecessors combined into one. In this a company can purchase highly customizable BPA software, and then make changes in it according to the company's own requirement.





Futuristic Boom- When Machines becomes mates in business

Robotic Process Automation (RPA)- In current E-commerce scenario, where technology and business go hand in hand, the line between human and artificial intelligence has been narrowed to a great extent over a past few years due to adoption of Robotic Process Automation in business operations.

In business, RPA facilitates software solution that enables automation of complex as well as routine processes, assisting humans for an efficient and productive outcome.


But now the question arises: **How does this automation takes place in RPA?**

The reason behind this automation is harnessing the best of technological processes like: AI technology, voice recognition, machine learning etc by RPA software, which empowers it with high degree of accuracy and task efficiency while in operations, taking the workflow of an organization to a whole new level.

Gartner world's leading research and advisory company has estimated about **40% of growth in robotic process automation market** from one year to the next by 2020.

Advantages of RPA

- One can always leave routine and ordinary tasks for the robots to work upon and can concentrate on more important work that requires immediate attention.

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- Robots are averse to the fact of taking breaks during working hours
 - Automated processes done by the use of robotic technology are less prone to errors as compared to humans and hence are more reliable
 - Robots increase the overall efficiency of the organizational workflow, resulting in decreased cost and increased productivity
 - Use of RPA software ensures better control in terms of various processes and helps in streamlining the process cycles
 - A single process can be assigned to multiple robots; likewise, a process can also be withdrawn easily from a robot as and when required

The list is endless, but the moot point is that it increases the value of human effort and raises the standard of working.

Cognitive Intelligence (CI)- By using cognitive technologies like AI, RPA processes can be equipped with automated emotional and judgmental capabilities along with skills like speech recognition, machine learning natural and language processing, for the purpose of carrying out tasks that demand such human like prowess. The idea behind this automation is simple, to make RPA processes accumulate, learn, and modelize data and information in a way so as to reduce the human intervention to minimum. When Robotic Process Automation (RPA) and Machine Learning work together as a unit it is known as IPA (Intelligent Process Automation) or CRPA (Cognitive Robotic Process Automation)

According to a BIS Research Report on Cognitive Robotic Process Automation of 2017: The market for CRPA platform and services

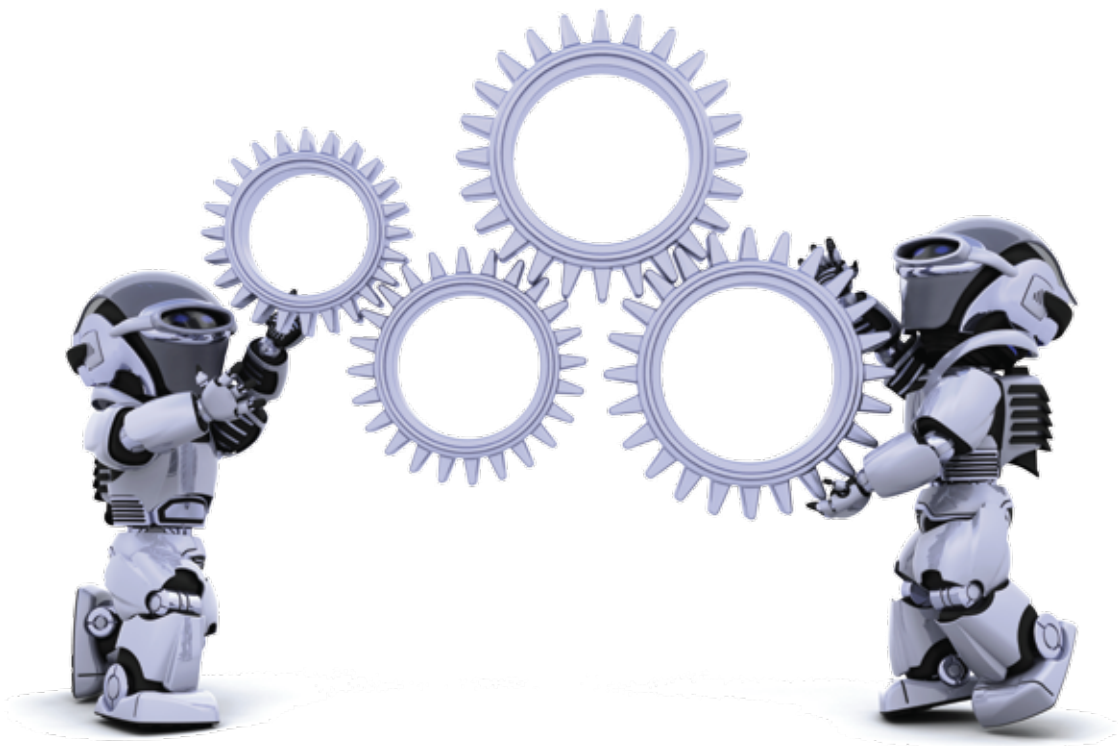



will mark a compound annual growth rate (CAGR) of **60.9%** from 2017 to 2026.

Machine Learning (ML)- To be able to work properly for the purpose it is deployed for, an RPA process needs a 'support system' to assist it in working 'smartly' and efficiently. Technologies like Machine Learning and Artificial intelligence instills a 'brain' into a RPA process which enables it to carry on the designated task with high accuracy and precision, without much human interference.

Machine learning is based on the principle of accumulating a huge chunk of data and information into some form of mathematical model. This prescribed model then can be used to harness the information and knowledge it contains for solving problems.

A great example of this Machine learning technology is **Japan's famous Conveyor Belt Kura Sushi**, a chain of **262 restaurants**. Here robots are the chiefs who make Sushi which get served through a conveyer belt. This automation has resulted in the cost-reduction of the Sushi plate to just **\$1**.






Artificial Intelligence (AI)- Although both RPA and AI technologies can work on their own, but as stated earlier, RPA cannot work effectively without the aid of an AI technology. It acts as a 'buttress' for RPA processes. The main advantage of using AI with RPA is reduction of probability of exceptions, resulting in exception-reducing workflow. It leverages the built-in ability to collect important discreet data in the background. Failure to do so, RPA can build a closed-loop system through automatic update of existing rule sets using machine learning technology.

A form of AI software technology known as '**Expert Systems**' was developed in 1970s, which gained popularity during the 80s and 90s. These were based on encoded rule sets to automate certain specific tasks.

In RPA, AI processes the pre-installed structured, unstructured and semi-structured data of a robotic process to extract relevant and meaningful information from it with help of technologies like **Natural Language Processing**.

Another important function that artificial intelligence performs in RPA is to make the robotic process judgmental. This done by using another remarkable AI technology known as '**Cognitive Reasoning**'.

Cognitive reasoning is a technology based on the concept of human cognition. It can help robots to attain high-level of understanding and learn from their working experience as well as from feedback. IBM's **Watson Cognitive System**, Apple's **Siri** and Google's **DeepMind** are some of the best examples of this technology. Experts in this field are of the opinion that 2018 could be the year, when AI will break into the mainstream. But it is to remember that AI in RPA is not at all limited to the functions mentioned above. The requirement of the functions to be performed by an AI technology however is non-exhaustive which can vary from organization to organization.





Future of BPA

In today's time a business needs to be more action-oriented as well as result-oriented to survive the ever increasing pressure of making and maintaining a brand image in a market full of competitors. So for the purpose of establishing that brand image, a business needs to adapt to latest technologies and techniques as well as harness the available resources to their full potential by integrating both of them into one powerful unit. And how can one achieve that? Business Process Automation is the Answer.

Business process automation is the future of 'next gen' business entities because it brings both old and new technologies together and creates a whole new business- friendly experience while undertaking routine business-related activities. It contributes to making the workflow, smoother, easier and efficient. With fast changing business practices scenario Artificial intelligence software robots are being used after performing and deploying robotic process automation.

And most importantly, it serves the best to the bottom line of every business organization - higher productivity, leads to higher profits.