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AUTOMATION AND CONTINUOUS IMPROVEMENT OF OPERATIONAL PROCESSES WITHIN A TRADING COMPANY

Abstract:

The permanent evolution of the operational process is a critical need generated by the increase of the demands of the final customers as well as by the increase of the complexity of the products or services. Analyzing the process and identifying opportunities for improvement, along with the fluidization of these processes, are the essential steps that must be followed by all the companies that wish to obtain operational performance, efficiency and profit. There are countless tools that can be used in this regard and all that needs to be done is to be known and implemented properly.
Automation solutions must be clearly based on the overall business strategy of an organization, in order for them to reap maximum benefits. It is about understanding the needs and seeing beyond optimizations and improvements. Mapping all departments and processes in the company is very important in this case. At the same time, the right people must be identified and trained. Employees feel threatened by new technologies, but with the help of well-structured and targeted upskilling programs, they can adapt and learn how to work with artificial intelligence, analyze data, discover and apply on-the-go solutions and take on new roles. Last but not least important, it is the strategy that will make the difference. Companies need to know their own strengths and have an overview of all processes, people and technologies to anticipate change and make decisions accordingly. Digital transformation is neither easy nor cheap, as the figures show, but it is inevitable, and the companies that strategically approach it have greater chances of being leaders in their field.

Keywords:

Effective Management, Objectives, Strategies, Automation, Process Improvement, Operational processes

JEL Classification: M10

Introduction

In the current times of digitalization, automation, aging of society, sustainability and internalization, the demands of stakeholders are becoming more and more complex and the environment of organizations is changing faster and faster, resulting in a situation where the only constant factor is change (Cozijnsen & Vrakking, 2003). This change comes in various shapes and forms; therefore, the companies will need to have the capability to adapt to the required pace in order to deal with increasing demands regarding service quality, corporate responsibility and ethics. The automation of business processes encompasses a series of techniques and activities that aim to standardize, systematize and facilitate processes within the companies, eliminating wastes and bottlenecks (among other procedures) to make them more efficient, as well as gathering information so that these processes can be optimized and managers can make more assertive decisions.

There are several methodologies and strategies for automating business processes, such as paradigm shifts, re-engineering, process redesign, and continuous improvement. Other important factors are the enablement of more transparent and agile information flows, with automated email alerts and responses – especially when tasks change hands (handoffs) – and the necessary conditions for the capture and measurement of Key Performance Indicators at various stages of the process. There are many benefits of automating business processes, and we can define the main ones as: increase profits, make processes more efficient and effective, facilitate monitoring and management, improve customer service, replace or control human tasks better and quicker, allow more transparency and agility in the flow of information, deliver products and services with more value to the customer, reduce cost, decrease risk and meet the organization's strategic objectives.

The improvement process takes place in an incremental way. We will need to analyze tasks individually, promoting specific optimizations that, when they accumulate, make the process much more efficient. Automation and the continuous business process improvements go hand in hand. For an industry that appreciates continual process improvement, the ability to manage operations remotely and with actionable data is extremely valuable. Technological advancements are commonplace as facilities' needs to keep up with customer demand, standards, safety and environmental regulations, and more to evolve.

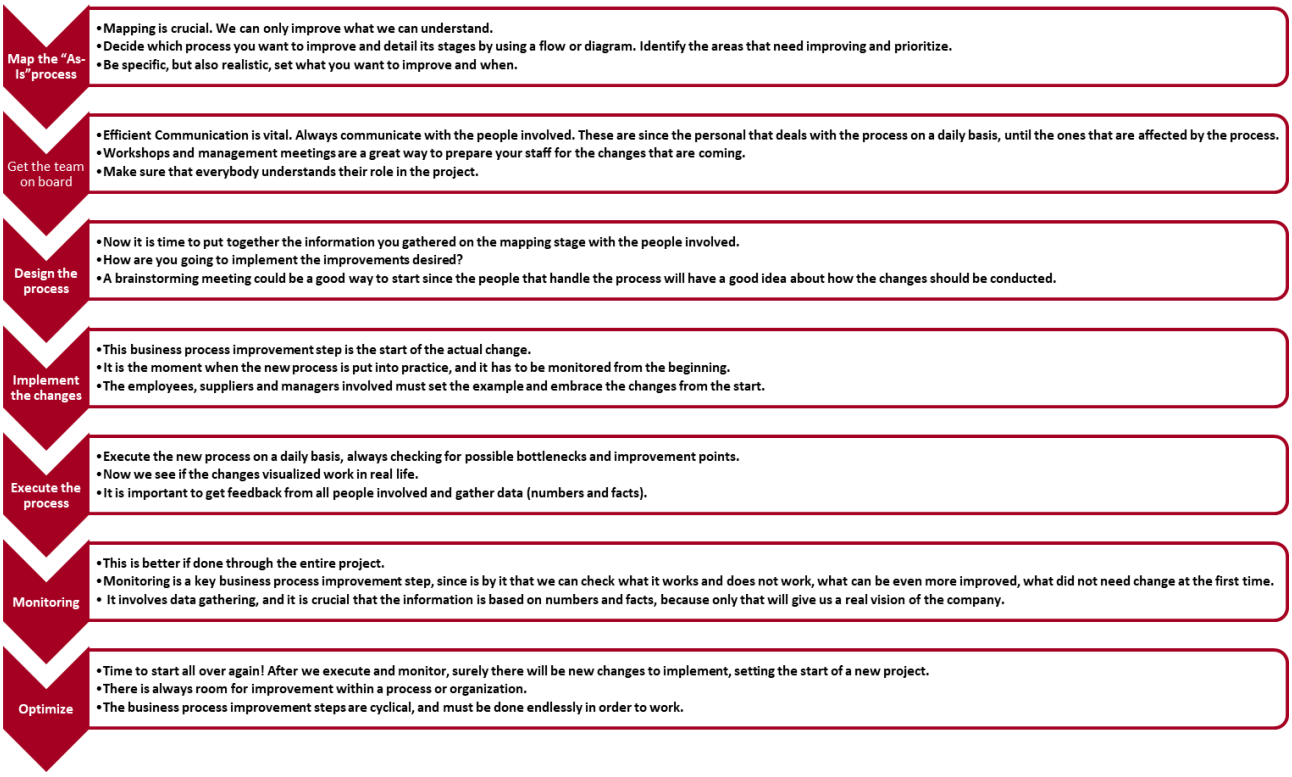
Content

Business process improvement focuses on incrementally improving existing processes. There are many approaches, including the popular Six Sigma approach (Pyzdek & Keller, 2014). It is usually narrowly focused and continuously applied at various stages during the life of a process and includes the selection, analysis, design, and implementation of the (improved) process. This usually results in an initiative or project to improve the performance of a process in alignment with the organizational strategy and customer expectations.

A company performs various processes every day. It is crucial to optimize and improve the processes if we want our organization to grow, or even to survive in the competitive market that exists today. There are numerous benefits that come with the optimization of processes such as avoid errors, cut costs and wastage, increase profitability, better the communication between

sectors and people, deliver value to customers and to be sure that the product or service is going to be delivered to the client with efficiency and efficacy. There are some key business process improvement steps to be followed in order to implement business process improvements within an organization, as per the figure below:

Figure 1: Key business process improvement steps to be followed



It is critical to map the real process and we should not exclude anyone as this creates the risk of not collecting all the necessary information. And a small omitted detail can make all the difference in building your process mapping flow chart. Moreover, if they are not all present, some may feel that they were not part of the decision-making process. They may think that it does not represent their point of view. To make this activity more agile and dynamic, we need to engage people, allow people to submit questions and suggestions for improvements.

In the second step, if everybody sees how these improvements will affect their work, the client's satisfaction, the productivity and profitability, it is easy to get excited and ready to work. For this, communicate clearly and set the example! Next step would be to try to set scenarios and see how the ideas will translate in a real-life situation. The employees, suppliers and managers involved must set the example and embrace the changes from the start. Next phase would relate to execute the new process daily, always checking for possible bottlenecks and improvement points. Monitoring involves data gathering, and it is crucial that the information is based on numbers and facts, because only that will give us a real vision of the company. How to create a management dashboard to monitor a business process? What are the Key Performance Indicators (KPIs) that will help management take the best-informed decisions? Last, but not least important step out of

the seven steps highlighted above, refers to always look for a reliable software when implementing them, since the results are worthwhile.

How do companies select which business processes to automate?

Technology is the enabler of business process automation (BPA), and it can automate workflows to the point where human intervention is unnecessary. Automation can save time and money, delight customers who no longer must wait in line for a person to assist them with a particular transaction. But not every business process is a good fit for automation, so it is incumbent upon companies to determine which processes are best suited to automation and which ones are best handled by humans.

Companies start by looking at the strategic and operating drivers for process improvement in their organizations and industries. For instance, in today's global market, nearly every company is feeling pressure to get goods to market quickly and to be first to market whenever possible. In a highly price-competitive environment, companies are also under great pressure to make economies on their operations in order to improve their margins, since it is not always possible to raise prices, therefore, several criteria are recommended to be used for guideline:

- Very manual and repetitive processes - a process with high trading volumes, very frequently, such as: daily, weekly, which involves a lot of manual work or are prone to human error.
- Processes with standard and consistent inputs. Inputs should also be in a readable format: such as Excel, E-mail xml, ppt, pdf Etc. A type of input that cannot be read (Scanned images without OCR cannot be automated.)
- Process methods – There should be no fundamental changes required in the current system architecture.
- Rule-Based processes - Activities with clear processing instructions (template-based); with decisions based on standards predictive rules.
- Volume of transactions - A voluminous process (and high frequency).
- Low Exception Rate - Activities with low number of variation scenarios in the process that would lead to different procedures
- Stable processes - well documented, stable, predictable for which the operational costs are known.
- Automation savings - It is recommended to automate only the processes that will bring intermittent savings effort.

One of the most recent automation technologies to emerge is robotic process automation, or RPA. RPA is a category of software tools that enable complex digital processes to be automated by performing them in the same way a human user might perform them, using the user interface and following a set of predefined rules. What sets RPA apart from other automation technologies is that its ability to imitate a human user of one or more information systems reduces development time and extends the range of functions that can be automated across a much wider range of business activities. It is frequently used to automate financial processes, such as comparing invoices with shipment notices, or transferring data from email and call center speech-to-text systems into

transactional systems of record. Many organizations have adopted it for automating back- and middle-office processes and many have achieved rapid returns on their investments.

How is RPA different from other enterprise automation tools?

In contrast to other, traditional IT solutions, RPA allows organizations to automate at a fraction of the cost and time previously encountered. RPA is also non-intrusive in nature and leverages the existing infrastructure without causing disruption to underlying systems, which would be difficult and costly to replace. With RPA, cost efficiency and compliance are no longer an operating cost but a byproduct of the automation.

Essentially, any high-volume, business-rules-driven, repeatable process qualifies for automation. Robots are here to stay. The faster you harvest their potential, the faster you create a competitive edge for your business. Robotic Process Automation delivers direct profitability while improving accuracy across organizations and industries. Enabling RPA to handle any processes will not only transform and streamline your organization's workflow. It will allow for superior scalability and flexibility within the enterprise, doubled by fast, tailored response to specific needs. Software robots are easy to train, and they integrate seamlessly into any system. Multiply them, and instantly deploy more as you go. They constantly report on their progress so you can go even bigger and better by using operational and business predictability, while improving strategically.

There are major benefits in the utilization of the robotic process automation solutions within the organization, such as briefly listed below:

- Better accuracy - Robotic Process Automation software robots are programmed to follow rules. They never get tired and never make mistakes. They are compliant and consistent.
- Improved compliance - Once instructed, RPA robots execute reliably, reducing risk. Everything they do is monitored. You have the full control to operate in accordance with existing regulations and standards.
- Fast cost savings - RPA can reduce processing costs by up to 80%. In less than 12 months, most enterprises already have a positive return on investment, and potential further accumulative cost reductions can reach 20% in time.
- Super scalable - Across business units and geographies, RPA performs a massive amount of operations in parallel, from desktop to cloud environments. Additional robots can be deployed quickly with minimal costs, according to work flux and seasonality.
- Increased speed and productivity - Employees are the first to appreciate the benefits of RPA as it removes non-value-add activities and relieves them from the rising pressure of work.

To benefit from fast ROI (Return of Investment), the companies should choose processes that have undergone a transformation initiative using the Lean Six Sigma methodology (Burghall, Grant & Morgan, 2014).

In order to develop a robust business case that can stand up to executive, operational and tactical evaluation, it is best to build a holistic business case consisting of four pillars: financial impact, operational value of the business, impact on the workforce and strategic alignment.

The importance of leadership and culture Dombrowski and Mielke (2014) found a different type of continuous improvement process in the few enterprises with a successful and sustainable lean implementation. This continuous improvement process is linked to a different leadership approach, which supports the relevance of 'leadership and culture' as a theme

The importance of digitalization and data analysis 'Digitalization and data analysis' becomes a relevant theme in continuous improvement, in the first place, because of the increase of digitalization and the importance of data in everyday life. Secondly, data analysis is used more often, e.g. the growth of the use of software to improve processes (Gartner, 2018).

What other automated solutions does a manager have at hand for simplifying, standardizing and systematizing the organization's processes?

Digital signatures are part of an approval procedure that ensures that only authorized employees can influence how the process continues. There is a difference between a digital and electronic signature. What is a digital signature? Following some research - an electronic signature is an electronic symbol attached to a contract or other record, used by a person with an intent to sign. In contrast, digital signatures guarantee that an electronic document is authentic.

We must acknowledge that there are some other means of automation at different process levels within an organization, such as bank statements processing and automatically creating the records in the local accounting, with no need for manual operator input. This will facilitate the release of an automatically remittance advise in order to avoid any further reconciliation issues with the customer's statement. This will involve importing of payments orders from ERP (Enterprise Resource Planning) to the internet banking system, with the financial controller's authorization. Easily extract transactions and account details from PDF bank and credit card statements. Once extracted, download the parsed data as Excel and CSV, or automatically update your accounting software.

Electronic data interchange is the concept of businesses electronically communicating information that was traditionally communicated on paper, such as purchase orders and invoices. Technical standards for EDI exist to facilitate parties transacting such instruments without having to make special arrangements. Electronic Data Interchange (EDI) is the electronic interchange of business information using a standardized format; a process which allows one company to send information to another company electronically rather than with paper. Business entities conducting business electronically are called trading partners. EDI has been used in the past primarily by automotive and retail businesses, however in the past few years, the format has been more widely adopted.

Users have commonly accessed EDI either by a private network such as Value-Added Network or the Internet in order to send and receive EDI-related business documents. Mobile EDI has had limited adoption, in part due to security concerns with mobile devices across an EDI infrastructure, but mainly due to the mobile devices themselves. The quality and size of the screen of most devices

Optical character recognition or optical character reader (OCR) is the electronic or mechanical conversion of images of typed, handwritten or printed text into machine-encoded text, whether from a scanned document, a photo of a document, a scene-photo (for example the text on signs and

billboards in a landscape photo) or from subtitle text superimposed on an image (for example: from a television broadcast).

Widely used as a form of data entry from printed paper data records – whether passport documents, invoices, bank statements, computerized receipts, business cards, mail, printouts of static-data, or any suitable documentation – it is a common method of digitizing printed texts so that they can be electronically edited, searched, stored more compactly, displayed on-line, and used in machine processes such as cognitive computing, machine translation, (extracted) text-to-speech, key data and text mining. OCR is a field of research in pattern recognition, artificial intelligence and computer vision.

Conclusions

There are many options available, but there is no other way for a company to survive in today's competitive market without keeping up the pace with the latest technologies / software, as well as focusing on permanently improving the operational processes.

Following the research, we can conclude the fact that, Robotic Process Automation solutions can be combined with changes in the relevant business process. If the goal is to go beyond basic labor arbitrage savings to improve the process — and it should be — then companies need a good understanding of both their existing business processes and the new processes they want RPA to enable before implementing the technology.

However, many companies do not take this approach. Their Robotic Process Automation implementations support the "as-is" process, with no improvement or examination of the current process steps that are automated. As a result, they may achieve modest savings, but in many cases, they will miss out on opportunities to dramatically improve process outcomes, quality, costs, and cycle times.

Because continuous improvement is aiming for elimination of non-value-adding activities, waste or losses (Locher, 2011) (King, 2009) (Shirose, 2007), it can be reasoned that producing a product correctly on the first attempt, so without e.g. rework and waiting, is more productive than not making it right the first time.

The main advantage of integrating Lean Six Sigma and Robotic Process Automation is that you get to have automated or non-automated processes, but optimized, under the control of your team. We need to recognize that automation is a wave, and we better catch it on time, given the fact that the financial impact can be impressive and at the same time, the cost of errors will decrease, as well as business practices will significantly change. On the other hand, customers will notice and will want more. Whether the managers would recognize it or not, digital transformation is at hand and it will help reduce the complexity of personnel management.

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