Digital Procurement on Systems Applications and Products (SAP) Cloud Solutions

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Abstract— **The number of businesses has exploded over the past few decades. This increased competition in the market between different products. The final price of the product is what distinguishes it from all its competitors. To cut down the final costs a business needs to optimize its internal processes. Procurement is the obtaining of goods to create value for spend. Traditional procurement is a haphazard process when done manually. Digitalizing the procurement process can exponentially optimize the process by increasing spend visibility. But the problem arises when choosing from among the hundreds of procurement tools available in the market. The objective of this paper is to spot out why SAP Ariba is the best choice for the problem of procurement. SAP Ariba is a cloud-based solution. Cloud solutions like Ariba provide a low risk of data loss, redundancy, and older data. This paper concentrates on the working of SAP Ariba operational and strategic procurement tools, its differentiating factors, and its advantages.**

Keywords - Procurement, Digitalizing, Cloud, SAP Ariba

I. INTRODUCTION

The emerging technology in recent years has although marked its growth impact in many of the business fields, it also posed certain challenges in adapting to the changes [1]. This paper describes the obstacles and respective efficient solutions in the area of procurement. Typically, every business organization purchase required materials to produce a semi-finished or finished good for supplying to their end-consumers. This was the point where the term procurement came into the picture in the act of purchasing things needed from a specific person. In the past, this procurement was just an act of buying materials from the suppliers, but many inefficiencies were also reflected in this approach. For instance, one of them is maverick buying, which is buying materials knowingly or unknowingly from others instead of established contracts. But as of now it changed its shape into a separate department. It took the lead in collaborating across functions in a new way to gain more profits across various enterprises [2]. The focus of procurement has spread over from the target of minimizing cost to creating value across the supply chain in business.

The digital transformation of procurement drives it to a more automated and efficient process and makes it insight-driven and predictive [3]. As SAP believed the procurement function will always play a strategic role, it made many advancements in the area of procurement to leverage the utmost benefits. This paper proposes a versatile solution called SAP Ariba to iron out the problems mainly faced in the area of procurement. The SAP Ariba is a cloud-based innovative software that remodelled the process of buying, selling, and managing cash. It supports the end-to-end processes of procurement from sourcing the materials from an appropriate vendor and manufacturing the end-product and selling product to the customers. It enables them to choose a qualified supplier according to their needs and also creates the value for spend across all the supply chains. With the use of advanced technology, the user experience in SAP Ariba has made the workflow effective. So, in this paper the main aspects presented are the evolution of procurement, digitalization of procurement, and the proposed solution SAP Ariba.

II. BACKGROUND

The procurement concept was in existence from the past 3000BC where scribes were used to manage the purchasing of the raw materials for the completion of Egyptian pyramids. In the mining industry, the purchasing and tracking of goods were looked after by a materials man [4]. But in the past, these activities were tedious tasks to perform and take more time as all were performed manually like making phone calls to suppliers, generating copies of the purchase order, and creating invoices manually. As the technology started advancing, procurement started to evolve from service to a function and new renovations helped the businesses in flexibly managing the supplier data, enabling to negotiate terms and conditions with the suppliers and easily forming the contracts for a long-term purchase [5].

Over the years, many solutions were developed for managing procurement operations daily in every business. In the early 1970s, the procurement focus was about reducing the costs of suppliers. During the 1980s, the procurement officials' view moved from cost-savings to the quality and dependability of suppliers. While in the 1990s, the impact of indirect spending was identified in the day-to-day business which is invisible in contrast to direct spending, and the value of customers for a business was spotted. As the importance of suppliers was realized by the business, in 1995s the supplier relationship management became an important factor, in which the suppliers are considered as partners and long-term contracts were initiated. The rise of automation of core processes in businesses resulted in the transformation of procurement function into the digital ecosystem leveraging the advanced technologies to drive growth and innovation. The evolution of procurement in different stages is described in the Fig.1.
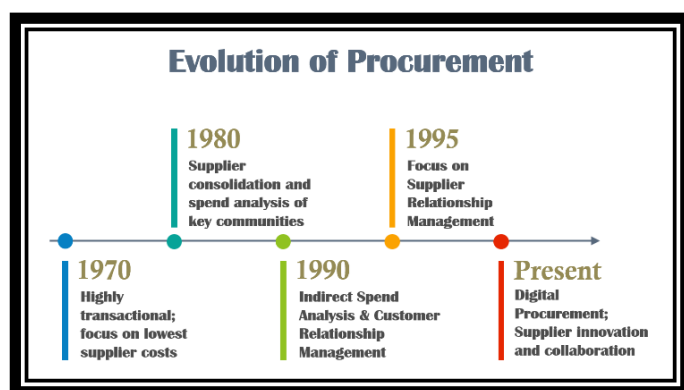
Figure 1: Evolution of Procurement

For instance, the SAP Company initially introduced the SAP MM (SAP Material Management) module for managing the procurement activities, in the later stages SAP SRM (SAP Supplier Relationship Management) module was used to handle the procurement activities and now the SAP Ariba is the key player in procurement which can be implemented in both on-premise and cloud platforms [6].

III. STATE OF THE ART

Various studies have been performed to elaborate on the procurement purpose and the impacts when the procurement digitalized. There are also some findings in which solutions for appropriately implementing digital procurement and how to get adapted the e-procurement solutions.

In the paper [7] the author has drawn out certain impacts on digitalization of the procurement throughout the world along with describing the limits and constraints to digital procurement. The authors of [8] have elaborated about the practices of adopting e-procurement by government entities and describes the critical success factors of migrating into e-procurement. In this study [9] the authors presented the patterns evolving by practicing the strategic procurement in business firms. In the paper [10] the purpose of procurement and explained about procurement planning which enhances the performance of enterprises. The paper [11] proposes an e-procurement system that helps in automating the traditional procurement and the main focus of the paper is regarded with the tender handling in the procurement.

According to [12] the implementation of e-procurement can gradually renovate the way procurement functions work in the company Skyward Express Limited. The authors of [13] proposed a framework called Ariba which makes the deployment of procurement functions in an easier way. In the paper [14] the authors presented the SAP's strategic solution Ariba which helps in collaborating the buyers and suppliers on a single platform digitally. According to the author in [15] the SAP Ariba offers solutions from small to medium businesses for facilitating sourcing and procurement and elucidated the expertise of the Ariba network in enabling to discover unique opportunities for growth in businesses.

IV. DIGITALIZATION: PROBLEMS AND SUGGESTED SOLUTION

Digitalization is the transforming of business processes, models, systems using IT solutions. This transformation is bound to impact not only the way things are done but also the people involved, like the stakeholders and employees of the company. With the rapid evolution of digital technologies like Cloud Computing, Blockchain, Machine Learning and Internet of Things in Fig. 2, the need for change in Procurement functions originated as to stand in the race of the competitive world [16]. The key value derived from the blockchain technology is that the procurement managers can get insights about the identity of suppliers, and their past performances based on which the best supplier can be chosen. Whereas the IoT helps the procurement function in enhancing the communication internally in the departments by making use of the sensors and physical objects avoiding the conflicts within. While Machine learning using the algorithms helps in automating the decision making and foresee the results. This gradually made the businesses realize that procurement is not only about purchasing goods and selling to the customers but creating value across the global supply chain. But digitalization of a business is not a smooth sail for the responsible executives [17]. There are thousands of factors to consider and ponder over before braving to take the step. The employees are not very welcoming to the change in the technology along with the initial cost and putting forth the proposal to the stakeholders are some of the problems affecting the decision to digitalize a business. Data security is another concern.
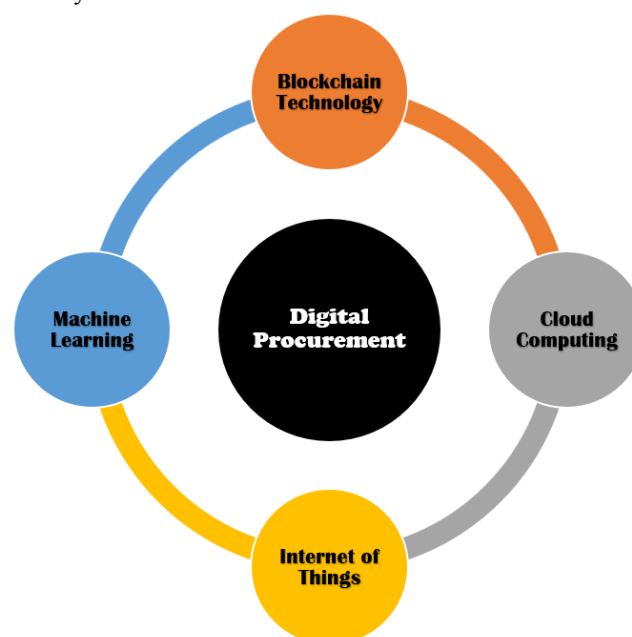

Figure 2: Technologies that help for Digital Transformation of Procurement

The insufficient knowledge and endorsement of the transformation to the employees and the stakeholders will cause inefficiencies in the business [18]. To avoid these problems proper knowledge about the necessity of the transformation should be given to them. To avoid employee pushback, it is important to maintain transparency in the process and create a goal that they would like to work towards. The major stakeholders, the customers, should not face problems during and after the transformation. To avoid this a substantial investment is needed to buy the best technical infrastructure and train the technical staff well so they can solve the customer's problems. To ensure a successful transition, start slow and allow the employees and

stakeholders to take time for being comfortable with the change. Then a proper plan should be made for the long term along with the people required to execute it. This planning should be thorough to avoid problems during the actual process [19].

V. RECOMMENDED SOLUTION : SYSTEMS APPLICATIONS AND PRODUCTS (SAP) ARIBA

In the pool of solutions for procurement, the SAP Ariba positioned itself with unique features and offered its customers with the finest services and support. The critical parameters such as user experience, cost savings, real-time business collaboration, and vendor management are readily equipped in the SAP Ariba solution. The users of SAP Ariba are ensured with greater transparency and visibility throughout the supply chain. The SAP Ariba Network is the world's largest comprehensive platform which helps in automating the internal process in a business. This wipes out the burdensome tasks of the buyers and suppliers and saves time so that they can put effort into gaining more visibility into the spending culture of a business. The companies can know accurate details of every supplier they connect with and can eliminate risks.
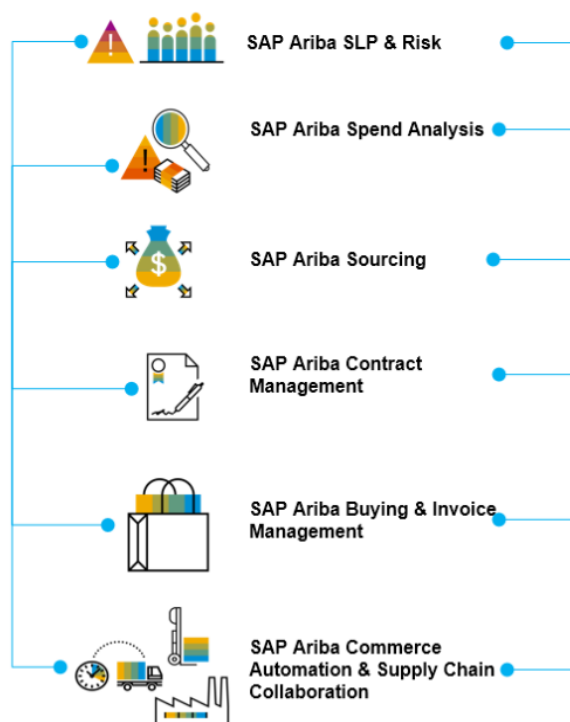

Figure 3: SAP Ariba Solution Portfolio

The SAP Ariba helps in constructing a healthy supply chain by enabling users to have visibility into all the procurement processes [20]. This solution also streamlines the financial supply chain management and boosts the capture of payment discounts and build-up free cash flow across the businesses. The user experience of Ariba is easily adaptable and enables flexible access to information which provides the employees to do work more smartly [21]. Also, the communication between the buyers and suppliers is made effortless by enabling them to converse directly with

each other in their native language [22]. The documents related to each phase of buying, selling, and contracts are maintained in the Ariba network and are accessible to both buyers and suppliers. With SAP Ariba, any size of business enterprise can get the expertise, resources, and tools they need for greater visibility, focus, and agility in global e-commerce – providing a wide range of solution portfolio as shown in Fig. 3 [23].

VI. ADVANTAGES OF ARIBA AND CONCERNS

In today's world every business looks for a procurement solution that caters both suppliers and buyers need. The SAP Ariba solution allows businesses to stay connected with their trading partners through the SAP Ariba Network. The users can get benefited from the cloud-deployed solutions of SAP Ariba. The key factors that make SAP Ariba stand out from all its competitors are:

- **Global Network:** The Ariba Network enables the buyers and suppliers to connect on a single platform. Using this, the buyers can look for new suppliers, and the suppliers can market their capabilities.
- **Cloud-Based Innovative Solution:** The SAP Ariba cloud platform enables real-time collaboration in the business organizations which is easily adaptable. It also minimizes system maintenance costs.
- **Supplier Relationship:** The buyer organization can make effortless communication with the suppliers regarding the terms and conditions, order status, etc.
- **Cost Savings:** The SAP Ariba cut down the unnecessary costs and helps in achieving the targeted goals by negotiating with the best suppliers, decreasing the internal processing costs, etc.
- **Reduced Supply chain risks:** The users of Ariba can have a clear insight into the entire supply chain which helps in eliminating the risks and leads to build a healthy supply chain.

Figure 4: Advantages of SAP Ariba

While SAP Ariba has its advantages, the organizations do have a few concerns that hold them back from digitalizing their procurement processes:

- **Costs:** The initial installation cost and then the costs for support while already implementing the solutions are a big hurdle that keeps the company from digitalizing its procurement process.
- **Better relationship with suppliers:** The enterprises who are regular buyers from a supplier get special

discounts, while in the digital procurement scenario the costs are standard for all. Also, the experienced purchasers can inspect the product better than relying on the product description given in the digital procurement site.

- **Employees reluctant to change:** Another major hurdle in the process of digitalizing, is the reluctance of the employees to learn a new technology amidst their already heavy workload.

VII. OBSERVATIONS

The observations from the study represent that although there are diverse procurement software vendors in the world, the SAP Ariba positioned itself as a top industry leader by providing unique capabilities to the customers. According to the Gartner Survey, SAP placed as a leader in procure-to-pay suite solutions for four successive times among other 13 procurement vendors in the market as shown in Fig. 5 [24].

Figure 5: Gartner 2019 Magic Quadrant for Procure-to-Pay Suites

The SAP Ariba compared to other procurement software provides the multitenant cloud model for its new customers in the industry and it transforms fully complaint invoices in 38 countries. The SAP Ariba digital procurement solutions help in decreasing the buying cycles by nearly 50% and is able to cut down the supply costs closely to 10% and reducing processing costs in between 25% and 60% [25]. From this paper, the key solution for digital procurement is recommended as SAP Ariba which fits best for all sizes of businesses.

VIII. CONCLUSION AND FUTUREWORK

Digitalizing all the business processes can be very intimidating even for the most established organizations. To help ease into it, the companies can start by digitalizing one or two processes at the start and evaluate its results. With a solution like SAP Ariba which is customizable according to requirements of the companies and easily integrate able with

their existing systems the transformation can be smooth and profitable, for most.

Furthermore this study can also research into what SAP Ariba tools will best fit what type of organization: based on size, industry, beliefs, etc.

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