IMPLEMENTATION OF THE ENTERPRISE RESOURCE PLANNING (ERP) SYSTEM: PROS AND CONS

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This paper contains a description of the implementation of an ERP system. It also includes some statistical data, basing on which advantages and disadvantages of ERP systems are identified.

Nowadays there are many environmental issues and all of them are interdependent. That is why, there is a question of using not only traditional methods to solve them, but also the widespread introduction of information technology. We live in the digital age, so mechanisation, digitisation and automation can result in significant increase of the level of efficiency in the fight against environmental problems.

Information technology encompasses the processes, that use a set of means and methods for the collection, processing, storage and transmission of data to obtain information of a new quality on the state of the object, phenomenon, information product as well as the dissemination of information and the modalities of such operations and methods.

Undoubtedly, one of the goals of technological development is to simplify manufacturing and let machines carry out burdensome or repetitive tasks instead of humans, so as to speed up production and reduce the risks, which endanger people's lives. For the time being the most crucial and perspective direction is modernising the methods, which help meet the requirements and needs of an organisation by consolidating all the systems and controlling them simultaneously without constant supervision. This is a general outline of what an enterprise resource planning system can offer.

To cut a long story short, an ERP system is the integrated management of main business processes, often in real time and mediated by software. It is a cutting-edge technology, originated in 1990s [1].

First and foremost, it is important to elaborate on the reasons, which make companies start to replace their old systems with ERP. Initially, this concept was supposed to be implemented by large enterprises, because they deal with enormous amounts of data, that are hard to process and analyse without technological advancements. This kind of system is designed to expedite preparation of resources before production starts, to deal with a certain number of customers at once and to be able to get a full report, which can provide managers with data about a company's expenses and benefits, state of equipment, supplies, orders and so on. As a rule, 25% of organisations choose ERP to increase efficiency [2].

What concerns small businesses, they more often than not decide on an ERP system because of being a member of a join-stock company. Thus, their course of action is greatly influenced by a corporation's goals. Still and all, in the Republic of Belarus some of the companies, particularly Atlant-M, IPG Photonics, Shate-M, have already started to shift to a new system or are in for it.

It is obvious, that new businesses, which are set up from scratch, do not face serious obstacles, because there is not such a plethora of products yet. Speaking of corporations, having significant commercial expertise, the process of implementation can last at least a couple of years and cost a lot. It should be noted, that most ERP implementations cost 3-4 times what was budgeted. In Belarus shifting to ERP systems, such as Microsoft Dynamics NAV, Sage Intacct, Deltek Vision, seems to be like pulling teeth due to the absence of versions of software, adapted for our legislation and market conditions [3].

In general, the implementation of an ERP system undergoes several phases. The first one is in fact the longest, because information about materials and resources in stock, goods, available for sale, trustworthy vendors and finance has to be uploaded into the corporate database for further use by system algorithms. Basically, a specific card of every single product is created. After that, a unique number is assigned to each card to provide users with quick access to any item.

However, it may sound as easy as falling off a log, but measures of this kind require hiring people with specific qualifications and skills to work with the mentioned systems, namely maintain them, test or update if needed. This is a brief description of the second phase. Moreover, employees, who have already

been working for a certain company, need to learn how to deal with a new system. Some of them have to take on additional responsibilities during the preparation process.

Finally, when everything is settled, managers make sure, that revealed bugs and errors are corrected and the system is ready for exploitation.

So, as it has already been mentioned, since the beginning of implementation about 2-3 years may pass until the system becomes available for corporate use.

One cannot deny, that apart from being time-consuming, the implementation of an ERP system can lead to other undesirable consequences. One of the first things, that can cross your mind, is obviously possible costs. For example, just in order to purchase licensed Microsoft software an organisation has to spend $8,265 per user. Besides, judging by the peculiarities of the first phase of implementation, a system is prone to inaccuracies, caused by human errors. In fact, 50 % of ERP implementations fail the first time around [3].

Needless to say, that one of the most essential questions for the topic under discussion is the following: do the advantages of an ERP system prevail its drawbacks to such a great extent, that its usage eventually appears to be lucrative?

Speaking of positive sides, one of them is being able to get access to corporative data in a comprehensive manner whenever a shareholder is willing to, in other words, in real time. This point is meaningful, because in comparison to less integrated solutions, the collection of data under different circumstances would take a much longer period of time.

Based on the above, an enterprise resource planning system enables its users to operate on large amounts of data with less resources and time, particularly track orders from acceptance through fulfilment, match orders, inventory receipts and expenses [1]. Furthermore, not only can an ERP system process data and prepare reports with no need to synchronise changes between multiple systems, but also forecast future sales, protect sensitive data by united security structures.

And last but not least feature, that should be covered, is the fact, that integrating an ERP system requires hiring specialists, experienced in the field of big data and, clearly, ERP systems. Undeniably, this point cuts both ways, because, on the one hand, a company has to allocate part of its budget for salaries for new employees. On the other hand, more people will be provided with workplaces.

In conclusion, it is necessary to underline, that ERP systems are deservedly in demand nowadays, provided, that prior to the beginning of the process, a company takes every possible disadvantage into consideration, numerous system functions can contribute to business goals. It is noticeable, that ERP systems can cover both commercial and non-commercial organisations. Recent statistic shows, that the most popular sphere, in which ERP systems are effectively used, is manufacturing (Figure 1) [3].
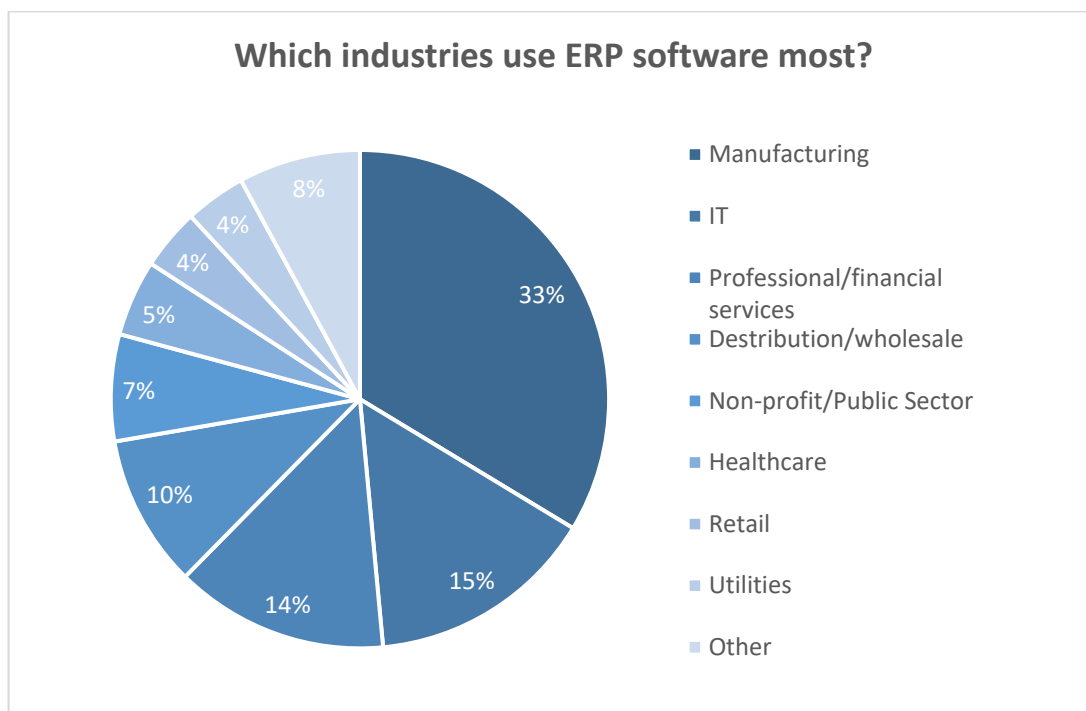

Figure 1 – ERP industry breakdown

Overall, the global market of software systems for enterprise management is expected to grow from $148,37 billion in 2021 to $202,28 billion in 2025, having increased by 8,1 % [2].

References:

1. Enterprise Resource Planning ─ [Electronic resource]. ─ Access mode: https://www.oracle.com/erp/what-is-erp/ ─ Date of access: 09.03.2022.

2. ERP Software Global Market Report 2021: COVID 19 Impact and Recovery to 2030 ─ [Electronic resource]. ─ Access mode: https://www.reportlinker.com/p06067821/ERP-Software-Global-Market-Report-COVID-19-Impact-and-Recovery-to ─ Date of acsess: 27.03.2022.

3. 45 ERP Statistics for the 2021 Market ─ [Electronic resource]. ─ Access mode: https://www.trustradius.com/vendor-blog/erp-statistics-trends ─ Date of access: 29.03.2022.