

SAP WMS IMPLEMENTATION MODULE – CONSTRAINTS, RISKS AND ISSUES. A CASE STUDY FROM AUTOMOTIVE AREA.

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Abstract: SAP Warehouse Management System module is one of the SAP modules, which is highly connected to the Material Management module and is used in companies that use warehouses as a source of material transit. Good warehouse management can be done with this module. In this case study, we will analyze how such a module was implemented in a company operating in the automotive area. It is located in Pitesti and, besides the SAP FI / CO modules, SAP SD, SAP MM has this module installed. The implementation of the SAP system in this company took 2 years and was a successful one, involving a number of 18 Functional consultants (12 seniors and 6 juniors). The technical part was made by the center of competence belonging to the mother company, located in France, in Paris. A series of legislative constraints were reported, a series of discussions stemming from this. A lot of reports were developed by ABAP programmers - allocated for this implementation by the company that made the implementation, the company located in Bucharest. Most issues were encountered in the area of finance - accounting, but also in the WMS area, where restrictions came from the storage area (a small deposit that did not correspond to a detailed organization - as SAP WMS proposes). Due to the fact that what was to be delivered had to be delivered as quickly as possible, even with very many interventions, due to the fact that the business environment was a dynamic one, the solution was changed four times - this assuming a delay of 2 months - for go-live. This delay meant an increase of the budget allocated by 7% - generating many discussions - this was assumed and understood by the management of the company.

JEL classification: C61, M15, M41, P41

Key words: SAP Implementation, ERP - Enterprise Resource Planning, WMS – Warehouse Management System, SD – Sales and Distribution, Production, ABAP, Go-Live

1. INTRODUCTION

The implementation of ERP systems in most companies that have resisted the transition from the socialist economy to the real market economy, after the 1990s, was one of the conditions for surviving an advanced competitive environment from one day to the next. The appearance of the big companies, in the Romanian market, facilitated the insertion within the companies in Romania, of the integrated systems, from Oracle Application, SIVECO, EMSYS, METSYS to SAP. About SAP the author of this article will discuss in the following, analyzing the implementation, in a company that activates in the area of production and sale of products related to spare parts, for cars. This business

area is a new one in Romania, in terms of implementing an application that manages a series of products, which come from a factory, belonging to the same company. Thus, from the implementation of the SAP ERP integrated system (Weidmann C., Teuber L., 2009), with the Financial and accounting modules, until Production, the SAP WMS module is less commonly encountered. This would have particularities to keep in mind, so that not all companies correspond. Here the author wants to mention, for the future researchers or for those who are interested in such an implementation, that the SAP WMS module needs a good organization from the company, a very well automated warehouse, very well trained people, knowing a foreign language. mandatory. most of the training manuals being in English. An architect and a good strategist is also mandatory, for thinking about future product organizations, which will be part of the storage process and the subsequent move / sale (Amini M., Savafi, N, 2013).

2. LITERATURE REVIEW

A number of authors, from abroad, as well as from our country, have written various articles on ERP system implementations. They all revealed things that happened in companies, based on the research done (Nemati et. All, 2010). Regarding the modeling part of SAP, of the processes encountered in the business environment, we can mention here a few articles (Leu J.D. and Huang L.T., 2009, Zhou Y., 2009). Global implementations have had a major impact on the business environments in the countries where they took place, so many researches highlight the risks and problems that were encountered in the implementation projects (Elragal and Haddara, 2013). From his point of view (Rashid and all, 2002) ERP systems were the ones that brought about the most significant change in the perception of the activity carried out in a company, from the point of view of use, efficiency and meeting the needs. company. According to what (Stefanou JC, 2002) he mentions in his research, these ERP systems (P.C.G, 2013) offer a perspective on the combination of several procedures used in the business environment, the existing applications - subsequently modeled, the departments in which the activity is carried out, all these things being done in a single database. Thus, redundancy in terms of data entered and stored disappears. Throughout my research on ERP systems, the author have come to the conclusion that these systems are designed for the computer, to facilitate the introduction in a single place (database) of all the information and data needed for management as well. more efficient business, for which the respective system is new / created (Ha Y. M., Ahn H. J., 2014). Here, the author, would like to remind (O'Leary, DE, 2000) that in his studies, he calls this type of system, type ERP, as follows: *“ERP systems have computer-based systems designed to process an organization's transactions and facility integrated and real-time planning, production, and customer response ”*.

3. LITERATURE REVIEW – SAP WMS

SAP WMS was one of the SAP applications (computer support) that came to meet those who had and have warehouses, facilitating their organization and management, the space and the way of organizing the products, the materials existing there, thus facilitating the timely and efficient processing of everything. which meant the logistical requirements, coming from a company. With what has come, new, Warehouse Management (WM), was that it offers flexible and automated assistance - regarding the management and processing of movements within a warehouse, in terms of goods (related stocks). Within such an application (the module within SAP ERP) economic processes are modeled and it can be

accepted that a complex warehouse structure can be defined and managed, used in all major warehouses.

4. THE BENEFITS, RISKS AND DIFFICULTIES – THE IMPACT FOR THE BUSSINES ENVIRONMENT – DISSCUSIONS – INVOLVED PARTIES

There have been a number of discussions regarding the adoption of SAP WMS in the company. The manager of the Logistics department having a series of branches, his dissatisfaction, being that he did not find support in understanding the solution that was conceived by the mother for the Romanian branch. Thus, after thorough investigations it was found that the final decision is based, as a stage in the SAP implementation project, following the recently more detailed findings in the WMS area, a decision from the business is expected in relation to the implementation of WMS in W1 (Pitesti). Based on discussions the business from Headquarter prepared a presentation in which was described the current situation in parallel with a draft of the “WMS” situation. They mention that, they would like to put the disclaimer that the “WMS” image is as per their current understanding. They mention that the experienced contribution is highly appreciated. They (the business from Pitesti HQ) mention that, they took into considerations the following criteria: storage space availability, flows, warehouse personnel, KPIs, Risks and impact for the entire business. In the relation to the warehouse operations, the objectives of the Romanian business, located in Pitesti HQ, are:

- to continue to contribute to the success of the business as a whole. All functions of the company from Romania are members of the same strong team;
- to keep\improve the warehouse KPIs;
- to reduce the risks;
- to maintain the good customers satisfaction regarding the delivery actions

Below, the author presents a sketch, as thought by the local business, which will show the distribution of the future central warehouse, and how WMS will optimize this location.

Warehouse – distribution on Pitesti location – solution proposed

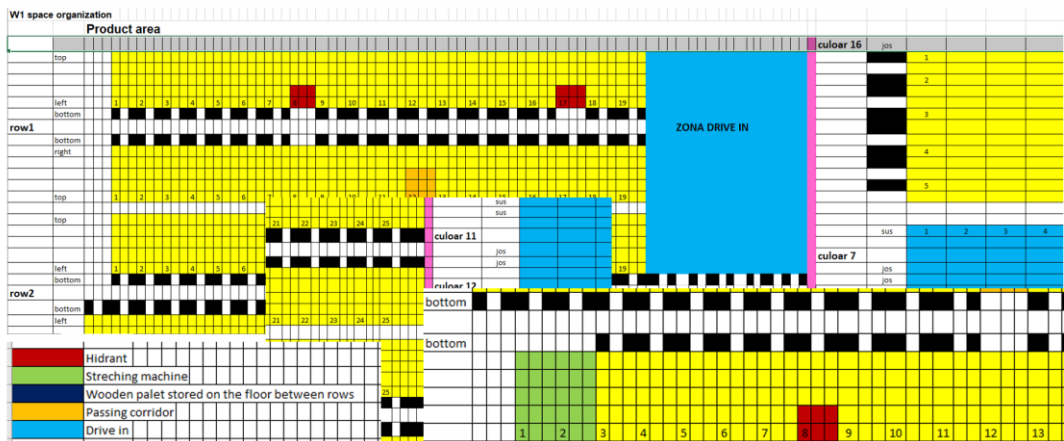


Figure no. 1 – Distribution inside of the warehouse

As can be seen from the number one image, when implementing SAP WMS, a diagram should be drawn up to show where and how the materials will be placed, how they will be part of their movements, from one slot to another. In the following figure (figure 2) we detail the structure of the company, how it is organized:

Pitesti location - Warehouses flows - solution proposed

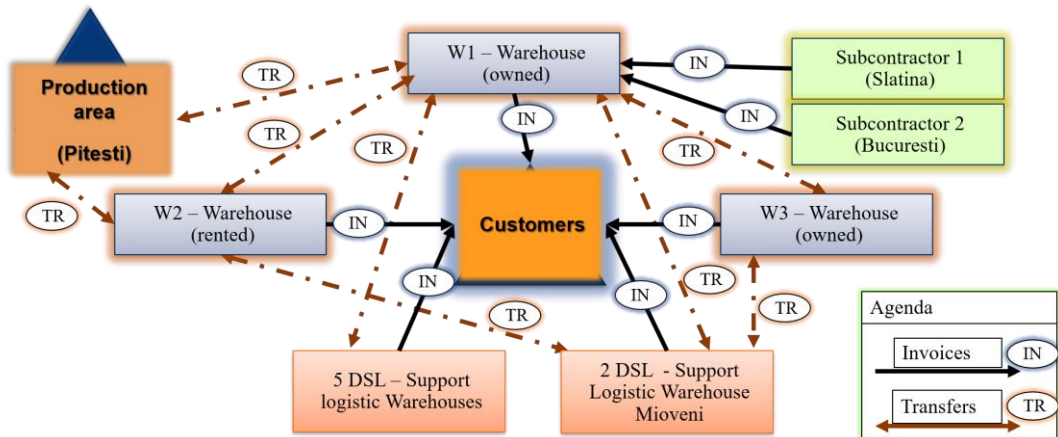


Figure no. 2 – Warehouses flows - design

What the Romanian center (local business), in fact Pitesti – local employees – managers - asked the mother company, is to ask SAP CoE, to give recommendations and expertise from all implementation SAP solutions, especially in the area of SAP WMS solution. This came from many discussions raised by the management in Pitesti, to the implementation consultants, and to which no answer was found. The raise the following questions:

- what we require from COE is a recommendation on what type of WMS do we have to implement in W1?
- would it be possible to implement WMS solution in Pitesti?
- would be a good decision from IT point of view?

Based on the answers to the above questions, we can conclude that, the management from Pitesti division, have formulated, the following requirements:

- we need more details about flows, number of transactions, number of documents.
- with the recommendation received, the management will go further to the decision makers for the business in Romania.

In everything described above, we can show below a series of risks that the Romanian business was subjected to, this WMS solution implementation. The big problem of this implementation was the approach in our country versus what the mother company wanted, for this branch. All the discussions, which took some time, led to an implementation from scratch, regardless of the rules in the group. Each party tried to impose its point of view, but for Romania, this (the law and the business environment) was one of the key points, under discussion, for that period. In the following table, the author details a series of risks, found, throughout the project:

Table 1. Validity of the research activities

SAP Module	Description	Priority	Difficulty	Response time (MD)	Mitigation plan	Critical
WMS	User manual missing	2	3	3	On-going activities, Deniz already finished some of the material training, QA check by WMS senior consultant	Yes
WMS	WMS flow to be presented	2	2	6	Nex week the WMS senior will provide a training / presentation about WMS flow	Yes
WMS	Label print to be checked	1	1	4	This will be checked by the senior WMS consultant	Yes
WMS	Good receipt in storage type 901 not automatically	1	1	2	This is solved and will be presented next week w30	Yes
WMS	WMS translation in ENG/RO	1	1	12		Yes
WMS	ZVLSAM issues	1	2	3	Instead of ZVLSAM transaction, was presented replenishment standard SAP transaction, and works. ZVLSAM is in polish, not translated in EN or RO	Yes
WMS	R03 put away strategy modification for storage type 305, was requested on w34	3	2	3	Check and test if strategy K allowed pre-allocation stock	Yes
WMS	GR in WM R02 R03 remains in 900 storage type, for R04 (Sandor) will be automatically, w35	3	2	3	Some customizing will be added	Yes
WMS	Split Warehouse R03 between normal and DGG sections, this was requested on w36	3	2	4	Material masterdate update, split profile for transfer order TO, update, proceses will be again tested	Yes
WMS	MM W - R02, R03 and R04 split of TO profile based on different picking areas (301, 305), was requested on w47	1	3	8	Masterdata files update	Yes

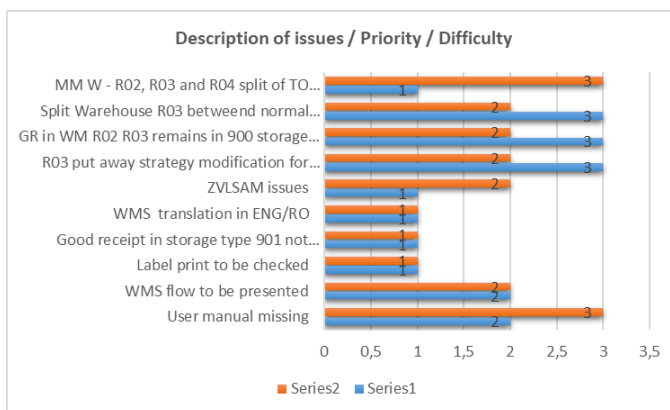


Figure no. 3 – Risks / Issues situation

Based on the figure 3 we can conclude that we have more tasks with priority 1 (5), with priority 2 (2) and with priority 3 (3). What we want to highlight is the fact that most of the tasks were very urgent, and the priorities changed from day to day, which required a great deal of stress from the existing consultants in the project. Even the difficulties were very great, due to the fact that the solution in Romania was a very complex one.

6. CONCLUSIONS

This case study, with the following examples, highlighted a number of difficulties that the Romanian business environment encountered after 1990. Many companies wanted to update their IT environment, only as they did. they did it was quite difficult. There are a number of things that need to be considered when you want to adopt a world-class ERP software package, such as SAP. More and more companies do not take into account the environment in which they are, what they have as infrastructure, what people have, prepared or not. These factors greatly influence such a project. Relationships established between the business environment and the project consultants, can influence the development of the project for better or worse. This project had many risks and problems, due precisely to the factors set out by the author above. The degree of resolution was very high, due to the tolerance shown by those who were on the project, SAP consultants. One thing that the author wants to bring to the foreground is that of the way in which the Romanian business environment understood very well what it means to use an ERP system, the way of working, the data to be added. , of the interpretation of these, in accordance with the subsequent development of the business. After the studies, it is clear that there is more to be learned in terms of managing and using an ERP system.

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