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SAP EWM: A Rival to Best of Breed Solutions?

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Summary

Four years ago, SAP Extended Warehouse Management (EWM) was released. SAP is now on their fourth release of EWM, and the product has gained traction in the marketplace, due in part to offering a robust solution with differentiated functionality.

Growing Traction in the Marketplace

Over the years, industry analysts have talked about best of breed versus ERP solutions. Best of breed solutions were built by software vendors that specialize in a much narrower range of solutions, have greater domain knowledge in a particular area, and build solutions that are much functionally richer.

> The SAP EWM solution was introduced to compete with best of breed solutions. Now on its fourth release, EWM is gaining traction in the market, offers the features and functions you would expect in a robust solution, and offers distinctive value propositions not offered by other leading suppliers.

In the Warehouse Management Systems (WMS) market, it was not uncommon to find companies that had implemented solutions from both an ERP company like SAP and a best of breed vendor. The best of breed solution was used in larger, more complex Distribution Centers (DCs), cost more, but provided a better return on investment based on providing better labor efficiencies. The internal proponents of buying best of breed WMS were in the logistics and distribution operations.

The ERP WMS solution was traditionally used in simpler warehouses - for example, a pallet in/pallet out warehouse, a warehouse connected to a factory, or a depot. The internal champions of an ERP style WMS were from the IT organization based on a lower total cost of ownership. In some areas, ERP style WMS solutions did have functionality advantages. When com-

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bined with other ERP solutions they were seen as providing better end to end to end traceability and recall capabilities, and for the warehouse connected to a factory, better support for picking and moving inventory to the factory line.

Public references for SAP EWM come from a wide range of industries:

- Caterpillar Logistics Services (Third Party Logistics)
- Celesio (Wholesaler)
- Ferrero (Food)
- Ford (Automotive)
- Indigo (Retail)
- Roche Diagnostics (Life Sciences)
- Wollschlager (Industrial Manufacturing)

SAP's Extended Warehouse Management solution, released four years ago, was SAP's attempt to release a solution that in time could compete with best of breed solutions on features and functions.

The solution is now on its fourth release, has grown its footprint, and has gained increasing traction in the market. From year end 2008 to year end 2009, the number of live customers more than quadrupled and the number of live sites increased by more than five times. EWM customers are widely varied in terms of region, company size, the type of warehouse and the complexity of the warehousing environment, and whether they were implementing the WMS solution in a manual or automated warehouse. EWM customers have became increasingly willing to speak at SAP events where they talk about their successful EWM implementations, and serve as references. One CIO was willing to say at a SAP event that for his particular industry – retail – he believed SAP was on par with the best of breeds.

A Robust WMS

A robust WMS's main payback bucket come from enhanced labor productivity. Any robust WMS will need to include the following kinds of features to drive labor productivity in a complex distribution environment:

- Support for complex process flows - Not just put-aways and picks, but multi-stage receiving/put-away/picking processes.

- Slotting – initially putting goods away, and later reslotting them if necessary, based on changes in downstream demand and using logic that minimizes travel times and maximizes storage utilization in the warehouse.

- Waving and task optimization – waving involves grouping tasks together so that shipment deadlines can be met but yet have the best person do a set of work in a way that minimizes travel time and maximizes that individual's productivity. Waving usually refers to picking activities. Task optimization can include task interleaving which intelligently combines picks and puts in order to reduce the distances workers travel in a warehouse.

- Cross docking and flow through – processes that minimize the number of times goods need to be touched. Why put something away and then pick it later (two touches) if you can move goods right from the receiving dock to the shipping dock?

- Labor management – the ability to ascertain how long a task should take a worker to complete in order to hold that worker accountable and better schedule work.

- Workload simulation – the ability to simulate how many workers will be needed on a particular shift to complete a given amount of work.

- Real-time work monitoring – tools for managers to use to monitor how effectively work is being done and to better allow the movement of workers from one area to another if bottlenecks are developing.

- 3PL Billing – for the 3PL vertical, 3PL billing is an essential productivity feature for warehouses that support multiple customers.

Different supplier's solutions will approach these functions in different ways. It is not always easy for an analyst to tell which vendor offers the best solution in a particular feature area. For example, which supplier offers the very best waving? It is hard to know. When one calls an end user after an implementation and talks about the ROI associated with a feature, users usually find it difficult to decompose the ROI of that feature from the larger WMS implementation project. Nevertheless, a robust WMS solution will include all of these features. And SAP EWM does do all these things.

Differentiated Functionality and Value Proposition

From ARC's perspective, SAP EWM also has clear areas of differentiation – places where their value proposition exceeds those of best of breed vendors.

- EWM is part of a larger enterprise suite of products. The traditional advantage of being better able to support a production line remains. The ability to support end to end traceability and recalls has if anything been improved, particularly in the food industry, based on recent SAP product introductions. The integration to Global Trade Services helps to insure the correct paperwork for goods shipped across international borders and for bonded warehouses. The combination of SAP's spare parts planning solution and EWM gives particular advantages for more complex spare parts warehouses. Finally, there can be total cost of ownership savings associated with buying all your solutions from one vendor.

- Future pricing is always subject to change, but currently SAP's EWM includes Labor Management and advanced slotting functionality without any extra fees. With other leading vendors, the WMS, Labor Management System (LMS), and advanced slotting are separate solutions. A customer can end up paying almost as much for a LMS or advanced slotting solution and implementation as they did for the initial WMS project. Because advanced slotting and LMS are often implemented separately from the WMS, it is possible to determine the ROI of these solutions. They both have a very good ROI, although the ROI of the LMS is better if it is based on granular labor standards.

- SAP EWM has a feature they call the Material Flow Solution, what is often called a Warehouse Control System (WCS) in the industry. A WCS solution integrates with conveyors, carousels, automatic storage and retrieval systems, and other forms of advanced automation in the warehouse. Most of the leading vendors do not have their own WCS; they partner with WCS suppliers for this solution. With EWM, the Material Flow Solution is part of the WMS code base. It is not even a separate module.

There are two problems with the partnering approach. First of all, companies end up with "islands of automation". A company decides to put in a carousel to help handle increased demand or to increase their storage density. They put in a WCS to integrate the carousel with the WMS. Later they put in an automated storage and retrieval unit. They put in a second WCS. Each material handling systems has its own interface and "island" of control logic. Maintaining several separate systems is costly. And when a company decides they want to upgrade its WMS, all of these custom interfaces can make the upgrade as expensive as implementing a brand new system. This is the islands of automation problem.

The second problem with having logically separate WMS and WCS is locus of control issues. The WMS wants to optimize the way manual labor is used. The WCS's goal is to optimize the throughput of the material handling system it controls. This leads to contention issues – what is the best way to optimize the activities of the entire warehouse as opposed to some subset of its entire activities? Only a solution architected like EWM can hope to optimally tackle this complex problem.

Conclusion

In short, EWM is a robust solution and a WMS that offers distinct areas of differentiation with other solutions in the market. Interestingly, this is also a more global solution than other systems – the LMS functionality is more interesting to North American companies, the Material Flow Control System to Europeans. The ongoing product enhancements for any supplier are based in large part on the enhancement requests they get from their installed base. SAP's installed base should help to insure that their solution continues to meet the demands of a global user base.

So is SAP EWM a rival to best of breeds? Yes they are.

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