

# ERP vs. Best-of-Breed WMS

Considerations for the Midsize Company C-Suite

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### Introduction

It has been around long enough to be considered one of those “classic debates”: ERP warehouse management module or best-of-breed warehouse management system? One would think that by now this debate would have been settled. The facts and opinions have been examined for well over a decade, surely there must be a clear winner by now. If only it were that simple.

There are many reasons why this debate persists. One of the primary reasons is that companies are made up of departments and people that often have differing, or even conflicting, priorities. Sprinkled in among these differences are often strong opinions. Opinions are not easily altered and the people that hold them didn’t get to where they are by quickly letting go of theirs in the face of debate.

Another key factor that keeps this debate fresh is the expansion of the dilemma to small and medium size companies. Early in the debate, most of the buzz was around SAP and Oracle ERP versus tier 1 best-of-breed warehouse management systems(WMS). Today, many ERP providers to small and medium businesses (SMBs) are also venturing down the path of expanding their suites to include warehouse management functionality.

Although still playing catch-up, the likes of SAP and Oracle have made gains in the last few years and are closing the functionality gap versus best-of-breed warehouse management systems. Due to a later start, the same cannot be said of ERP providers to SMBs. In this space there still exists a significant gap with respect to warehouse management system functionality. If the debate were solely focused on functionality, it would be short-lived for SMBs. Since there are other factors to consider, the debate endures.

This whitepaper will examine the decision factors from the viewpoint of the C-suite of a midsize company. While many of the considerations will apply to companies of all sizes, it is the midsize company that will be the primary focus. After reviewing the considerations for each key stakeholder, the whitepaper will provide recommendations for reconciling the perspectives and coming to a sound decision.

### Chief Operating Officer (COO)

The operations team will ultimately use the system to run their business so their primary focus will be on the system’s functionality. They will be looking for a system that not only meets their complex requirements today, but also a system that will enable them to grow, meet new requirements in the future, and that will provide tools to differentiate themselves from the competition.

The operations team will also be looking for a system that will ensure gains in operational efficiency. Maintaining the status quo in this area will be unacceptable. Systems implementations are difficult as there is a learning curve with new technology. Without the real benefits of increased operational efficiency and cost control, operations may resist the change and therefore adoption will be hindered. There will be the pervasive feeling of having fixed something that wasn’t broken.

So let’s take a closer look at functionality. ERP providers to SMB’s are in the early phases of creating warehouse management functionality. Naturally, any software company that is building a new product is going to start with the foundational elements. Just like constructing a building, if there isn’t a sound foundation, then anything else built on will be of no value. This is an important point. While it is clearly necessary to have a solid foundation and it is the correct place to start, it is not where the core value will be delivered from the system.

As an example, take picking rules. A best of breed system will have dozens of different rules that can be applied in each operation. These rules have been built up over time from implementations of the system across many industries and customers. This functionality not only provides a much higher level of flexibility, but it also provides the assurance that the functionality has been exercised and proven in the field many times

over. Contrarily, an SMB ERP has far fewer options in this area so the customer has a choice, they can make do with the existing functionality and forego the operational efficiency gains; or, they can implement customizations or workarounds each of which will increase cost and risk.

The list is actually quite long when one scrutinizes the functionality gaps between an SMB ERP warehouse module and a best-of-breed warehouse management system. The following highlights those that will have the biggest impact on the operation:

Function	Capability		Business Impact
	SMB ERP	Best –of-breed	
Container Management	Single level - often only pallet	Multiple levels - including nesting (e.g. cases on pallet and eaches in cases)	Multi-level container management enables varied movements to be created and executed in warehouse and provides ability to ship to customers in multiple units of measure. With multi-level, ASN information can be provided to customer since item level container detail will be available.
User Interface	Many are exclusively paper based	RF interface for all warehouse functions	RF technology ensures real-time inventory updates resulting in higher inventory accuracy and elimination of manual tracking and data entry.
Task Management	Limited prioritization capabilities and no interleaving of tasks	Extensive task management and interleaving capabilities	Task interleaving and work prioritization reduces wasted moves and ensures customer commitments are met.
Picking Rules	Generally a single sortable code on locations to define pick path	Dozens of pre-existing picking rules as well as ability to create user defined rules	Advanced picking rules enable increased efficiency and inventory accuracy through order batching, optimized pick paths, and proper execution of inventory strategies (e.g. FIFO).
Put Away Logic	Usually a single primary put away location for each product	Advanced put away logic and ability to create user defined rules	Advanced put away logic ensures better space utilization and increased efficiency through ability to top off of pick locations, segment inventory across zones, and comingling of products
Value Added Services (e.g. kitting/light manufacturing)	No ability to perform value added services in base product	Numerous value added service capabilities	The ability to provide value added services for customers fosters innovation, provides operational flexibility and is a key differentiator.
Ancillary Tools – Dock Scheduling, Transportation Optimization, LTL/ Parcel Shipping Integration	Not available in base product	Integrated functionality in warehouse management system	These are key tools in delivering value from the warehouse management system through increased efficiency, reduced costs and reduced errors from manual processes.

These are but a few important examples where functionality gaps exist. As highlighted in the introduction, if it were solely functionality based, the decision would be easy. However, there are other key stakeholders, so the discussion must move beyond functionality. For the system to deliver value and foster confidence with the operations team, it must function without failure and have near 100 percent up time. That is where the IT team comes into the discussion.

### **Chief Information Officer (CIO)**

It is the IT department that is charged with supporting the system and the infrastructure. They will be the ones that receive the call in the middle of the night if there is a problem. Familiarity breeds confidence so this group is going to be partial to a solution that meshes with their team's skill set. All other things being equal, the IT department would likely favor implementing their ERP's warehouse module.

There is a good chance that the IT group has managed the ERP system's other modules prior to looking at expanding to the WMS module. They have built the required skills to maintain the system and to ensure that it is available at all times when needed for the end users.

Anytime new technology is introduced to the mix, there is a learning curve and there will likely be some bumps in the road. If these early challenges become too frequent and start to impact operational efficiency, confidence in the system will be lost and adoption impeded. These conditions can offset the benefits of the deeper functionality and the system benefits will not be realized. This is where a COO may be swayed to accept a solution that matches existing technology despite the functionality deficiency.

Undoubtedly, implementing any new technology will have risk. However, there are steps that can be taken to reduce this risk and to prevent issues that will impact end user confidence in the system. Best-of-breed providers have the experience and domain expertise to build a thorough implementation plan with risk mitigation strategies based on years of experience. ERP providers' domain expertise lies with their core ERP systems. They will have to rely on third party implementers or their own non-seasoned personnel to put together the implementation plan.

Many IT professionals assume that integrating a best-of-breed WMS with their ERP system will be a significant expense and result in one-off code that is difficult to maintain. In most cases this assumption is not valid. Many WMS providers focused on medium sized business have remove the complexity of WMS to ERP integration by delivering standard, out-of-the-box ERP integrations. These ERP integrations are often proven at multiple customer sites. In fact, the best of breed integration to the ERP may be running at more sites that WMS built into the ERP itself!

A recent innovation is altering the conversation around this topic. Many best-of-breed providers offer solutions that are cloud-based. The customer can outsource the maintenance and support to the experts that designed and built the system. With this model, the customer IT team does not need to become well versed in the new technology. So, if skill gap is the primary hurdle that the IT team has to overcome to support a best-of-breed solution, there now are alternatives for clearing that hurdle. This avenue is also often more cost effective in the long term.

Before casting their final vote, there are a few additional important questions that must be considered by the IT team:

- System uptime: is there batch processing required that requires downtime and if so, does the operation have a time window available when this can occur (daily and/or weekly)?
- Upgrade feasibility: will the level of customizations and workarounds with either system impact the company's ability to upgrade in the future to take advantage of new innovations. If upgrade is possible, what will be the cost to carry forward customizations?
- Does the system have integrations to other third party systems that are used by the business? If not, what are the costs and time associated with building these interfaces?

One final consideration that must factor into the IT teams decision process. As the functionality of the ERP warehouse module is not yet well developed, customizations and workarounds will be required to meet requirements. They must consider the long-term cost and risk associated

with this path. This path will always result in some level of defects that must be managed by the IT team and can potentially impact the business.

### **Chief Financial Officer (CFO)**

For most CFO's, it's all about the money. If their involvement is limited to examining the up front capital numbers, it will be difficult for them to look at any option other than the "free" ERP warehouse module. When selecting a WMS, many companies make the mistake of weighing only the base product costs using a high level requirements analysis and implementation costs based on a standard, generic project plan. They do not consider what modifications and other hidden costs may be necessary for the system to meet their requirements.

There are four key pitfalls to avoid when doing the financial analysis for a WMS project implementation. The first pitfall is to limit the costs analysis for functionality delivery to the requirements in a standard RFP checklist. These checklists often leave too much up to interpretation and therefore when the project begins, it is discovered that what was a "yes" on the checklist actually turns out to be a qualified yes. These qualified yeses will lead to customizations and workarounds and likely cost overruns.

The second pitfall when building a business case is that it only examines the costs involved in the project and does not consider the potential benefits. There are many companies that look at the purchase of such a system as a necessary cost of doing business and do not assess the potential benefits from operational improvements. Leveraging a WMS company with deep domain expertise can help the customer to get to the facts around benefit potential. They will be able to provide case studies and access to existing customers that have realized the benefits. Proof points are key.

The third pitfall is over-looking the impact on inventory when performing the financial analysis. When implementing a paper-based system, there are intermittent inventory inaccuracies that result from a non real-time system. The natural tendency is to compensate for these inventory inaccuracies by carrying additional safety stock. This has a real impact on the financials, through the cost to carry the additional inventory. The system's ability to support the operation's inventory strategies must also be considered. For example, does it support multiple strategies such as FIFO, serialization, and advanced date/lot tracking? These are all critical questions for companies to ask as they strive to protect one of their most valuable assets.

Finally, the fourth pitfall to avoid is to use too short of a time horizon when evaluating the costs and benefits. Customizations, and the resulting increase in support and maintenance fees over time must be included. Many of the benefits that are achieved in the initial implementation are likely to be reoccurring over the years and therefore the time horizon should be at least five years when putting together the business case. Upgrades must also be included in the analysis. Will it be possible, and if so, what will be the cost?

All of this boils down to two key questions for the CFO: which system provides the shortest path to value and which system delivers the stronger business case over time?

### **Reconciling the Differences**

Given the diverse and often conflicting viewpoints of the key stakeholders, how can a company possibly reconcile the differences and come to a decision? Perhaps adding another office to the c-suite and employing a CMO (Chief Mediation Officer) is the answer. Okay, perhaps adding a "C" level person is a bit much, but any selection committee will benefit from retaining a person that can examine the situation objectively without having a direct tie to the above groups.

Whether or not the selection team leverages a mediator to manage the differences, there are steps that the team should take to ensure that the process is objective:

- Identify the success criteria: what are the key business objectives that the company is looking to achieve through the implementation of the system?
- Find the common ground: there are likely many items (e.g. customer service improvements, competitive differentiation) that all groups will agree on and highlighting these areas in the success criteria will be a big step towards establishing the objective selection criteria.
- Weight the decision criteria on what will drive the most net business value for the organization. All criteria are not created equal. Assigning value to each is a key step in reconciling differences between stakeholders.
- Develop a holistic business case that takes into account the defined success criteria and the associated value to the business.
- Tackle the above items before the evaluation process begins and before meeting with prospective vendors.
- Avoid having one department drive the decision process alone. Each stakeholder group must be represented through a strong voice.

### Conclusion

This debate has lingered for over ten years. It is likely that the debate will continue for another ten years. The reality is that there is a place in the industry for each model and it is up to each company to evaluate which is a better fit for their operations.

For simple warehouse operations, such as full pallet in, and full pallet out, with limited need for advanced inventory strategies, the ERP module may suffice. Or, if one of the company's core competencies is information technology, then maintaining a single technology platform that aligns with current skill sets may be the answer.

Operations with more complex requirements will need to look beyond their ERP provider for a solution. Differentiators in the industry are achieved from diverse functionality that allows companies to meet unique customer requirements, not core functionality. For operations that seek these differentiators, best of breed is the only viable solution.

Bottom line, companies invest in these types of systems to reduce costs, increase efficiencies, and to improve customer service. Whichever system best meets these objectives is the solution that the company should select.

#### ABOUT MSA

MSA Systems has been in business since 1996 and is focused on delivering best in class turnkey Warehouse Management and Supply Chain solutions. We are a strategic partner and authorized master distributor for Accellos and we are also a certified implementation specialist for Accellos A-1 WMS and A-1 WMS 3PL. MSA Systems differentiates itself by providing turn-key supply chain solutions inclusive of WMS Software, services and support as well as the wireless network, RF and RFID handheld computers and label printers. You can contact MSA by emailing [info@msasys.com](mailto:info@msasys.com) and [kim@msasys.com](mailto:kim@msasys.com)



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