

WAREHOUSE MANAGEMENT SYSTEM SELECTION HANDGUIDE



DATASCOPE
WMS FOR SYSPRO

WAREHOUSE MANAGEMENT SYSTEM SELECTION HANDGUIDE

FOREWORD

With over 20 years' supply chain experience working in and consulting to large South African companies, we have seen how leading companies use software systems to differentiate their operations from their competitors.

Great ERP software systems are an absolute necessity in any professional business today. However, many businesses have successfully implemented their ERP systems and are now focusing on further software solutions to take their businesses to the next level.

With an increasing trend toward outsourcing manufacturing (in many cases to the East), and a growing customer expectation for prompt and professional service, traditional manufacturing companies are now concentrating more on importing, warehousing and distributing their product range.

This has led to organisations upgrading their distribution facilities, investing in modern warehouse equipment and WMS (Warehouse Management Software) solutions. Unfortunately we have seen a growing number of "casualty" implementations where the selected WMS solution either falls short on key functionality or fails to integrate seamlessly with the client's ERP system.

To assist companies in making the correct WMS selection, we at Datascope Consulting have compiled this WMS Selection Guideline document. We strongly suggest that this guideline is used – it will make all the difference.



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www.datascope.co.za



THE IMPORTANCE OF WMS SELECTION CRITERIA

This booklet serves as a practical guide to assist companies in making the correct Warehouse Management System (WMS) choice.

It is important to understand that the strategic competitive advantage objective must drive the need to automate your warehouse and distribution process. Once companies understand the strategic objectives, a situational assessment of the current challenges will most likely define the need for change.

TYPICAL COMPANY STRATEGIC OBJECTIVES MAY INCLUDE:

- > A three hour warehouse turnaround time which will give the company a competitive advantage;
- > Legal requirements which may enforce strict batch / lot control at product level [e.g. Food safety regulations];
- > Minimising risk where bespoke developed systems have become obsolete;
- > Growth opportunities through acquisitions or the building of new plants and warehouses;
- > Taking business systems (such as ERP) to the next level through improved supply chain initiatives;
- > Ensuring customer order fulfilment rates of >98%. Failure to achieve these levels may result in contractual penalties;
- > Improving customer service levels by ensuring accurate sales order picking. This will reduce customer returns;
- > Ensuring batch and FIFO control within the factory WIP processes;
- > Improving inventory controls, stock visibility and the elimination of pilferage;
- > Improving picking and warehouse efficiencies, etc.

A real-time integrated WMS is "mission critical" to the operations and therefore Datascope believes that the selection of the right WMS is critical to your business. Experience has shown that this selection decision will either make or break your business. Currently, if an ERP system is down for an hour or so, the operations will probably continue normally making use of manual processes. If a real-time WMS is down for an hour, it will stop the operation totally. Take the picking of goods. If the picking transactional time takes too long, the WMS process will cripple the operation.





DEFINE YOUR WMS EVALUATION CRITERIA

So how do companies ensure they select the best WMS for their business? Datascope Consulting has compiled the following matrix which will, if used, facilitate and drive the selection process.

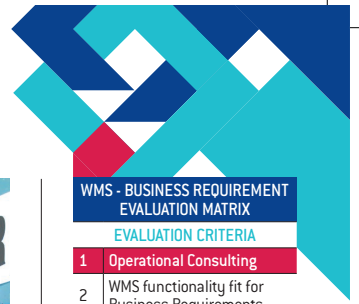
WMS - BUSINESS REQUIREMENT EVALUATION MATRIX

EVALUATION CRITERIA		Score: High - 5 Low - 1	Weighting	Company A - Weighted Score
1	Operational Consulting		7	0
2	WMS functionality fit for Business Requirements		15	0
3	Ask your ERP vendor which WMS reseller they recommend		5	0
4	ERP Integration		12	0
5	Standard Plug and Play Software		5	0
6	Product & Company sustainability		5	0
7	General look and feel of software		3	0
8	Company's implementation methodology		12	0
9	Implementation time (number of weeks)		5	0
10	Number of other companies running the software		10	0
11	Local support		5	0
12	Knowledge of ERP System and business requirements		5	0
13	Costs		8	0
14	Business risk		3	0
			100	0

THE FOLLOWING FOURTEEN CHAPTERS WILL:

- > Give valuable information regarding the WMS Reseller's professionalism;
- > Cover a WMS functionality checklist;
- > Indicate whether the system is real-time integrated into your ERP system or whether it is a standard product;
- > Indicate how much add-on development is required to meet business requirements;
- > Outline project management methodologies used during the implementation phase;
- > Estimate how long the implementation will take and at what risk to the business;
- > Detail what support is offered long term; and
- > Explain what costs and return on investments apply.

Datascope Consulting trusts that this guideline will help you succeed in selecting the right WMS partners for your company.



ADDRESS OPERATIONAL CONSTRAINTS
PRIOR TO IMPLEMENTING WMS

1. OPERATIONAL CONSULTING

A key differentiator between WMS Software Resellers is the extent to which they consider current operational constraints. A professional WMS Reseller should pride itself in giving companies specialist advice regarding the general warehouse layout, the receiving operation, the cross-docking operation, the number and position of pickface and bulk bins, the dispatch area with cages per routes, etc.

It is important to note that no matter how good the WMS software, operational constraints need to be addressed and rectified prior to the WMS implementation phase of the project. Datascope Consulting works closely with two Industrial Logistics Groups that specialise in supply chain strategies, facility design and development, including what material handling equipment is best suited for the operation.

Many of the companies with which Datascope works, require WMS due to increased revenue growth. It is therefore important to build in growth percentages into the future when considering structural changes.

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2. WMS FUNCTIONALITY FIT FOR BUSINESS REQUIREMENTS

It is vital that companies prepare a WMS software functionality checklist based on their business requirements. The software reseller should be asked to complete the RESPONSE column of this checklist during the selection process, prior to being short-listed.

INSTRUCTIONS

[COMPANY NAME]

The WMS worksheet contains functionality pertaining to the WMS software requirements
The priority column is [COMPANY NAME]'s rating of the functionality

PRIORITY	EXPLANATION
HIGH	High = Non Negotiable
MEDIUM	Medium = Important
NICE	Nice to Have
FUTURE	Future Requirement

Complete the Response column indicating your software's ability to cater for the functionality as follows:

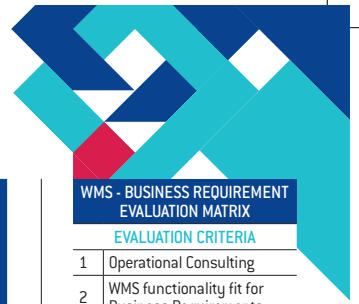
RESPONSE	EXPLANATION
SUPPORTED	Supported as delivered "out-of-the-box"
MODIFIC	Supported via modifications (screen configurations, reports, GUI tailoring, etc)
3rd PARTY	Supported via a third party solution
CUSTOM	Supported via customization (changes to source code)
FUTURE	Will be supported in a future release
NOT SUPP	Not supported

Please select the appropriate response from the drop-down list for each criterion.
Note: the selection must represent the current state of a product or service. Do not insert or delete rows as this will impact scoring
A non-mandatory comment column is available

DOWNLOAD A WMS FUNCTIONALTY CHECKLIST
ON WWW.DATASCOPE.CO.ZA

Attached is an example of what this functionality checklist may cover. Datascope Consulting has compiled a detailed WMS functionality checklist spreadsheet which can be found on the "WMS for SYSPRO" page on the following website: www.datascope.co.za.





WMS FUNCTIONALITY CHECKLIST - EXAMPLE		[COMPANY'S] PRIORITY	WMS RESELLER RESPONSE	INTERNAL ASSESSMENT			COMMENT
				EXCELLENT	ADEQUATE	DEFICIENT	
2	INBOUND						
2.1	WMS must have the ability to process ERP purchase order receipts	HIGH					
2.2	WMS must have the ability to process ERP LCT (landed cost tracking) receipts	HIGH					
2.3	WMS must have the ability to process ERP job [WIP] receipts	HIGH					
2.4	WMS must have the ability to process ERP GIT (goods in transit) and SCT (supply chain transfer) receipts	HIGH					

Companies must ensure that there is a good fit between the WMS software offering and the business requirements.

3. ASK YOUR ERP VENDOR WHICH WMS RESELLER THEY RECOMMEND

Most ERP systems today cover the day-to-day business very well. ERP systems traditionally are strong in finance and manufacturing control. Typical ERP modules include: accounts payable, accounts receivable, cash book, EFT, general ledger, asset register, container management, inventory, purchase orders, sales orders and analysis, bills of material, work in progress, factory scheduling and requirements planning.

Basic inventory control is covered but typically ERP systems do not drive the warehouse optimisation efficiencies on an hour by hour basis. This is where the best of breed WMS systems play a huge role in optimising warehousing operations.

ERP vendors (like SYSPRO) have created an API E.net business object layer which facilitates third party software products to seamlessly integrate into the core ERP product. Datascope's WMS has been built specifically for operation with the SYSPRO ERP.

It is therefore very important to get a list of the top two WMS Resellers your ERP provider recommends. Ensure that these Software Resellers are on your shortlist and that they are ERP Partners.

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4. ERP INTEGRATION

Seamless integration to your ERP is one of the most critical factors in any WMS selection process. Only consider buying a WMS which has already been integrated into your ERP system and investigate any sites at which the WMS Reseller claims that this has been achieved. From our experience, there are two classes of WMS:

1. International WMS packages which are rich in functionality but have little or no experience in integrating their system into your ERP system; and
2. Smaller WMS packages which have a certain level of integration with the core ERP system but are not rich in functionality.

Companies must select WMS products that are both rich in functionality (good business requirement fit) and are seamlessly integrated into the ERP system (built specifically for your ERP system).

Wherever possible, data must be held in the core ERP product. Many WMS packages have failed due to the fact that their own separate databases are built which can be placed out of synchronisation with the ERP system. Data integrity then becomes an issue and faith in the system is lost. Best of breed WMS packages have a balance report which shows any inventory variances between the ERP and the WMS.

Do not underestimate this vital requirement!

SEAMLESS WMS INTEGRATION
TO ERP IS CRITICAL





5. STANDARD PLUG AND PLAY SOFTWARE

WMS Resellers need to be upfront with prospective clients as to where their products currently do not have the required functionality. In Datascope Consulting's standard proposal document, all business transactions are covered in detail and if additional development is required in order to meet a client's requirements, this is clearly stated. Companies must look for a standard WMS product with off-the-shelf functionality that is a >98% fit to their business.

Again, if development is required, this must be quoted for up front, built into the project plan and this extra functionality must be checked and signed off prior to the on-site WMS installation commencing. On-site development must not be allowed, as this leads to all kinds of version control issues.

6. PRODUCT & COMPANY SUSTAINABILITY

This is more than merely a software procurement decision. See this as a business partnership over the years to come. It is suggested that you ascertain the following information from WMS Resellers:

- > Look at their last three years' financials.
- > How much of the annual license fee revenue is pumped back in product R&D?
- > What strategic modules does the Reseller intend building into the product over the next 12 months?
- > Visit the company's premises to ascertain the level of professionalism. (Meet the staff; look at the Business Plan for the fiscal; look at the individual staff goals; what is the level of morale?; look at their support department and see how support calls are managed; look at the development department and obtain a broad understanding of the development methodologies, etc.)
- > What are the WMS Reseller's goals for the next five years?
- > Is the WMS Reseller a Microsoft Gold Partner, and if so, what system did Microsoft audit?

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COMPANIES MUST ALSO BE CAREFUL IN CONSIDERING HARDWARE COSTS FROM VARIOUS WMS RESELLERS.

7. GENERAL LOOK AND FEEL OF THE SOFTWARE

The WMS product's look and feel is important. Remember that every single inventory transaction will be conducted on a wireless scanner or a PC front-end. One must consider how easily the current warehouse staff will adapt to this software.

Ask the WMS Reseller how many hours they have built into the product. They should know the answer without hesitation. Any world-class WMS solution would have over ten thousand hours of software development invested in the product.

Consider the WMS architecture. A leading WMS solution would be developed in leading software technologies such as Microsoft .Net and Microsoft SQL.

Companies must also be careful in considering hardware costs from various WMS Resellers. This hardware normally consists of wireless scanning devices, barcode label printers and wireless access points and antennae.

Datascope Consulting has standardised on the Intermec and Cisco hardware brands.



8. COMPANY'S IMPLEMENTATION METHODOLOGY

Successful WMS implementations do not just happen! They are only successful if they are based on sound Project Management methodologies. Companies should ask WMS Resellers to explain how they will go about implementing the system.

Similar to an ERP integration [Pt. 4], we believe WMS implementation methodologies to be another critical factor to consider. Datascope has over the years developed this detailed methodology. Every Project Manager is audited after every WMS implementation and this rating forms part of his / her performance appraisal rating.

THE FOLLOWING ARE SOME CRITICAL ITEMS WHICH SHOULD FORM PART OF THIS METHODOLOGY:

- > WMS proposal document – approved
- > Functional and technical specification documents – approved
- > User Acceptance Testing (of all transactions using the client's data) – signed off
- > Project and payment plan – approved
- > Weekly project team meeting held – all actions recorded on an activity list
- > Bin layout diagrams – approved
- > Warehouse wireless access point audit completed
- > Hardware ordered, configured and installed
- > Software installed (PO receipting and labelling of all incoming stock, bin labelling and stock take on labelling)
- > Project hours recorded per milestone
- > Agreements approved – SLA's
- > Change control documents in place for out-of-spec requests
- > Customer project sign off register – for every project milestone
- > User Training Guides and Training registers
- > Stock-take variance and go-live approvals
- > Post go-live project gap list
- > Project final sign off and hand-over to the support team
- > Customer Loyalty Index survey (post implementation satisfaction)

**WMS RESELLER MUST HAVE SOUND
PROJECT MANAGEMENT METHODOLOGIES**

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9. IMPLEMENTATION TIME

It is important to agree to a Project Plan up front, showing milestone activities and deadline dates. Implementations that drag on will be sapping on your team. Typically, a leading WMS Reseller would take eight weeks to implement an end-to-end medium-sized warehouse, with a large implementation lasting 12 weeks.

Companies need to ensure that WMS Resellers plan to have adequate resources on-site during the stock take period and into the next few weeks to support and handhold staff as the systems bed down.

10. NUMBER OF COMPANIES RUNNING THE SOFTWARE

Companies should ask WMS Resellers for a list of all clients (with contact names) running their WMS software. Ensure that some of these are contacted to get that important 'on-the-level' feedback.

It is also strongly suggested that at least two of these companies are visited to see the WMS in operation. Ascertain how many companies within your category of industry are running the WMS Reseller's software successfully.

At least one of the sites should be running the same version of your ERP solution.

11. LOCAL SUPPORT

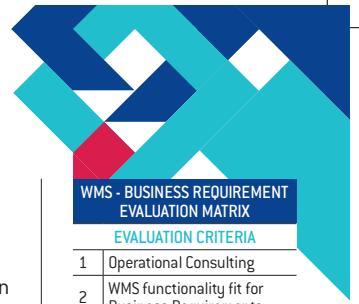
Local support staff as well as a remote support desk is important. Companies are encouraged to ask WMS Resellers what their various support contracts entail and to obtain an understanding of monthly costs.

We always suggest that new WMS sites sign up a support contract for the first 12 month period.

Also ask WMS Resellers to explain how they manage their support calls and whether there is the ability to rate support calls on a 1 to 5 scale once the call is closed. Datascope Consulting has a Client Support Portal which manages support calls professionally and gives clients full visibility.



**VISIT AT LEAST ONE SITE
RUNNING THE WMS SOLUTION**



12. KNOWLEDGE OF ERP AND BUSINESS REQUIREMENTS

WMS Resellers should be specialists not only in your ERP system but also in supply chain management, in order to provide strong business partner support. To be a good software developer is not good enough.

The WMS environment is a specialised field and it is always good for companies to ask the Directors of WMS Resellers to give a brief explanation of their experience.

13. COSTS

Always insist on a fixed price project. Many Software Resellers work on a time and materials basis which carries no risk for the reseller and the project invariably ends up way over budget.

YOUR WMS PROJECT COSTS SHOULD INCLUDE:

- > Software costs (based on the number of named users and modules required);
- > Implementation costs based on a project plan;
- > Hardware costs based on required hardware; and
- > An annual License fee cost.

Project scope creep needs to be properly managed using approved change control requests.

A Payment Plan needs to be linked to the Project Plan and this needs to be approved prior to the project commencing. Companies should enforce a retainer of 30% of the total project cost which is paid on final project sign-off. (Normally a month after go-live).

14. BUSINESS RISK

BUSINESS RISK MUST BE MANAGED THROUGH:

- > The appointment of Project Sponsors at a senior management level (we suggest the IT Director and the Operations Director).
- > Weekly project meetings must be held with activity lists minuted. This activity list should be at a detailed level and would include all required actions for both the WMS Reseller and the Client.
- > The WMS Reseller must ensure that all WMS operators have attended formal classroom training and on-the-job training in a real test environment. It is however the company's responsibility to ensure competency assessments are done on every operator prior to go-live.

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- > The company must ensure that the correct calibre persons are appointed to key WMS positions. These include:
 - Receiving Supervisor: managing purchase order receiving, labelling and put away of incoming stock, and customer returns (inbound stock);
 - Warehouse Supervisor: managing sales order reservation and releasing, the management of picking slips on the floor, and stock management (stock takes & cycle counts);
 - Dispatch Supervisor: managing load planning, distribution and customer queries (outbound stock).
- > It is vital that no or very limited business interruption occurs after go-live. Companies must ask WMS Resellers how they are going to manage this risk.
- > Software version control is also vital. Ask WMS Resellers how they manage their development cycle, their testing of versions and the upgrade path and version control.

QUANTIFY WMS SELECTION CRITERIA

The final step is to get members of your WMS Project Team to evaluate the WMS Resellers submissions and give the Board detailed feedback on the team's decision.

We at Datascope Consulting hope that this simple guide will assist you in selecting the best Warehouse Management System and Partner for your company.





To view DATASCOPE's WMS video clip visit
WWW.DATASCOPE.CO.ZA
(ON THE: WMS FOR SYSPRO PAGE)



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