WAREHOUSE MANAGEMENT SYSTEM SELECTION HANDGUIDE

FOREWORD

With over 30 years’ supply chain experience working in and consulting to large international 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 organizations 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 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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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 order 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;
- Management of key performance indicators, 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
ADDRESS OPERATIONAL CONSTRAINTS PRIOR TO IMPLEMENTING WMS

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

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 specialize in supply chain strategies, facility design and development, including what material handling equipment is best suited for the operation. This includes sales data analysis, establishing which SKU’s need pickfaces, the sizing of the pickface bins, etc.

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.

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.

THE FOLLOWING SEVENTEEN 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;
> Explain what costs and return on investments apply;
> Discuss available software platforms, as this is a long term investment.

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

<table>
<thead>
<tr>
<th>PRIORITY</th>
<th>EXPLANATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIGH</td>
<td>High = Non Negotiable</td>
</tr>
<tr>
<td>MEDIUM</td>
<td>Medium = Important</td>
</tr>
<tr>
<td>NICE</td>
<td>Nice to Have</td>
</tr>
<tr>
<td>FUTURE</td>
<td>Future Requirement</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>RESPONSE</th>
<th>EXPLANATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUPPORTED</td>
<td>Supported as delivered “out-of-the-box”</td>
</tr>
<tr>
<td>MODIFIC</td>
<td>Supported via modifications (screen configurations, reports, GUI tailoring, etc)</td>
</tr>
<tr>
<td>3rd PARTY</td>
<td>Supported via a third party solution</td>
</tr>
<tr>
<td>CUSTOM</td>
<td>Supported via customization (changes to source code)</td>
</tr>
<tr>
<td>FUTURE</td>
<td>Will be supported in a future release</td>
</tr>
<tr>
<td>NOT SUPP</td>
<td>Not supported</td>
</tr>
</tbody>
</table>

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.

Below is an example of what this functionality checklist may cover. DATASCOPE has compiled a detailed WMS functionality checklist spreadsheet which can be found at: www.datascopewms.com/resources/functionality-check-sheet

<table>
<thead>
<tr>
<th>WMS FUNCTIONALITY CHECKLIST - EXAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>(COMPANY NAME)</td>
</tr>
<tr>
<td>WMS RESELLER</td>
</tr>
<tr>
<td>2.1 WMS must have the ability to process ERP purchase order receipts</td>
</tr>
<tr>
<td>2.2 WMS must have the ability to process ERP LCT (landed cost tracking) receipts</td>
</tr>
<tr>
<td>2.3 WMS must have the ability to process ERP job (WIP) receipts</td>
</tr>
<tr>
<td>2.4 WMS must have the ability to process ERP GIT (goods in transit) and SCT (supply chain transfer) receipts</td>
</tr>
</tbody>
</table>

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 optimization efficiencies on an hour by hour basis. This is where the best of breed WMS systems play a huge role in optimising warehouse 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.

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 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 synchronization 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!

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’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 >99% 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?

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. More recently software technologies such as HTML5 should have been used to have an Android Platform version available.

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. Forklift mounted devices are also becoming the standard.
WMS RESELLER MUST HAVE SOUND PROJECT MANAGEMENT METHODOLOGIES

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 resources. Typically, a leading WMS Reseller would take 10 – 12 weeks to implement an end-to-end large-sized warehouse, from sign-off of the Functional Specification Document.

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. Also look on the WMS Resellers website for customer reference letters, case studies and videos.

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 has a Client Support Portal which manages support calls professionally and gives clients full visibility.

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 Senior Management Team of WMS Resellers to give a brief explanation of their experience. Look the individuals up on LinkedIn.

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 and services 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). Price should not be the deciding factor in the selection process!

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.
- The wall to wall inventory count just before Go-Live is vitally important. Experience tells us that data imports normally lead to failed implementations.
- The client must also manage expectations with their customers. There will be a general slow down in the warehouse for the first week after Go-Live as operations get used to new processes and technologies.
- 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 putting 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.

15. LATEST TECHNOLOGIES USED – ANDROID / CLOUD BASED

The current shift in barcode scanning industry from predominantly Windows Mobile to Android applications is unstoppable.
Ask the WMS reseller if they offer a full Android suite (scanner and PC front-end) while still supporting the traditional MS Mobile applications. Many clients will still run the traditional MS Mobile devices for a few years to come.

With more and more companies running their IT infrastructure off-premise in a cloud-based platform like MS Azure, it is of utmost important that the client ask the WMS Reseller if their software will run in this cloud environment. The cost of hosting servers on-premise is becoming very expensive with the regular need for hardware refreshing.

16. INTERNATIONAL FOOTPRINT

Many companies either have a national and/or international footprint. From the clients Group IT strategy perspective, it is important to standardize on one ERP system and one fully integrated WMS solution throughout the Group. This will assist with streamlined reporting and the standardization of processes within the Group. Once a greenfield implementation is successfully completed, this will become the standard and often this will bring down the implementation costs as this standard is rolled out within the Groups branches.

If this is the case, then the WMS Reseller needs to have an international footprint. This will also enhance the WMS Resellers ability to implement and supply the client across continents. Ask the WMS Reseller what their international footprint looks like. This should also be clear from their website.

17. STANDARD BUILT IN KEY PERFORMANCE REPORTING

One of the key benefits of a good WMS solution is to be able to quickly see areas where efficiencies need to be improved. The client should ask the WMS Reseller to show them standard built in KPI measures and reports. The ability to put these KPI’s onto large performance screens in the warehouse will drive the right efficiencies and ensure continuous improvement and target setting.

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