

Discussion Paper

Questions to ask yourself *and* your vendor when selecting a

Third Party Warehouse Management System



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Objective

The purpose of this document is to provide insight into the evaluation of cost, features and issues surrounding the selection and implementation of a WMS (*warehouse management system*). There is no question that an investment in technology is essential if you want to achieve operational success and maximize profitability in the 3rd party warehouse industry. There are however, a number of options available and the key is to select a full featured, yet affordable WMS application that will enable you to keep pace with the ever changing demands of today *and* of tomorrow. And to ensure that the application you select can be implemented successfully. *Our featured product is an affordable, full featured WMS application called MAXwms, developed by IngenX Business Systems Ltd.*

Introduction

In today's rapidly changing marketplace, the 3rd party warehousing industry, like many others has become increasingly competitive and much more complex. The companies most likely to succeed will need to place extra emphasis on the following critical areas of their operations.

- Customer Service
- Accuracy, Reliability & Timeliness
- Labour Productivity
- Rates for Services

A WMS (warehouse management system) software application is the tool operators need to efficiently manage the flow of inventory and information, monitor and manage labour productivity and deliver a level of expertise, service and reliability that meets or exceeds the customer's expectation.

Benefits of a successful WMS Implementation

A good warehouse management system will reduce overall operating costs, while improving accuracy and customer service levels.

It will enable you to train order pickers much more quickly as there is no longer the need to know all about the products stored by each customer. They simply follow the instructions on the scanner to locate and select the correct product and quantity.

To evaluate the potential for savings, you may want to ask yourself the following questions:

- How successful have we been in attracting, training and retaining employees?
- How much training is required before employees are able to work reliably on their own?
- How much time is spent doing manual data entry or duplicate data entry and what would be the impact of reduced clerical manpower requirements?
- How do you measure productivity?
- How much time is spent "looking" for product when trying to pick orders?

- How much time is spent creating reports and responding to customers?
- How frequently are you faced with “claims” for lost product, short shipped or incorrectly shipped product?
- Have you lost customers as a result of shipping errors or inventory discrepancies?

Although most public warehousing companies recognize the benefits of real-time wireless data collection when look at a new warehouse management system, there is often a view that they are costly and difficult to implement. They may not think they have the resources to commit to a successful implementation. The reality is that a successful implementation will deliver immediate results and *it's not unreasonable to expect a payback within one year.*

When selecting a WMS vendor, you should make sure they fully understand your business, your billing and service strategies and the kinds of relationships you have with your customers. They also need to understand the industry in general and help you recognize new opportunities that may be possible with the right systems in place.

But most importantly, your WMS vendor must be willing to commit the support required to help you implement. You should be prepared to appoint an implementation *champion* or team leader that has the responsibility, authority and most importantly the time to drive the implementation, without having to maintain the all of the responsibilities of his regular day to day routines.

The results are well worth the effort.

Not all WMS applications are created equally.

There are a variety of different business models used by WMS software developers to operate their businesses and it's very important to know specifically what you should expect to receive for your investment. And of course, it's essential that you evaluate the WMS features to ensure that it will provide the flexibility needed to meet the demands of your existing clients as well as new business opportunities.

There are a number of WMS components that are required for a successful implementation and therefore a number of questions you'll want to ask in order to evaluate the overall cost of implementation.

The basic WMS software application:

- What is the cost of the WMS software application?
- Are all the features included in the basic application or does the vendor expect you to purchase add on modules in order to activate features you may need to meet a particular customer request?
- Has the application been developed using a current programming language and is a plan in place to keep pace with changing technologies.
- Do the developers have experience in the warehousing industry?

- Do they fully understand the day to day challenges faced by warehouse operations personnel and the various requirements of typical 3rd party warehouse clients?
- Has the application been developed to support real-time wireless data collection or does it rely on “batch” scanners or manual data entry?
- Is the WMS a SQL based application? SQL (Structured Query Language) is a standard interactive and programming language for getting information from and updating a database. Although SQL is both an ANSI and an ISO standard, many database products support SQL with proprietary extensions to the standard language. Queries take the form of a command language that lets you select, insert, update, find out the location of data, and so forth. There is also a programming interface
- Does the basic application have all of the features you will need to run your business?
- Can it also be used as a manual data entry system if necessary?
- Is training provided and are there additional costs associated with training and implementation?
- What are the annual support costs and what do you receive as support?

Wireless Data Collection Hardware

- What is the cost of the scanner hardware and wireless backbone?
- Who is responsible for the installation and configuration of the wireless network and are there additional costs associated with this?
- If being used in a freezer environment, have the vehicle mount or handheld scanners been specified for freezer temperatures?
- Has the software developer written the program to run on the scanners and is it included in the price of the WMS software?
- Does the software vendor require you to purchase the hardware through them or can you purchase hardware through another company as long as it meets the specifications required by the software developers. i.e. the handheld or vehicle mount scanners using Windows CE 5.0
- Is training provided and are there additional costs associated with training and implementation?
- What are the annual support costs and what do you receive as support?

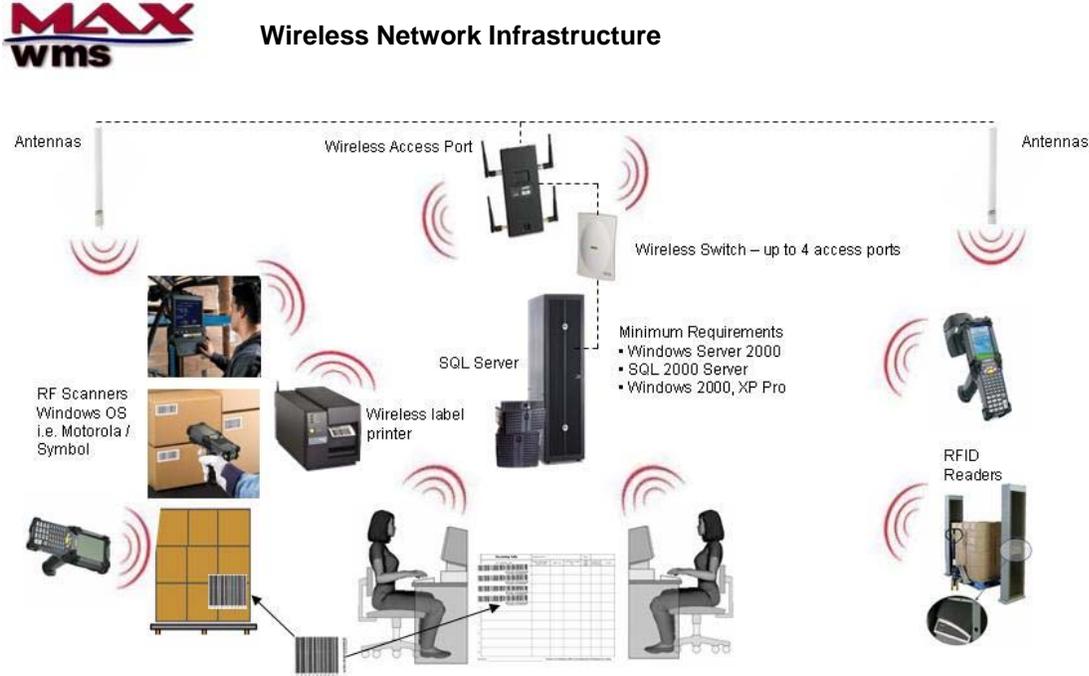
Web Interface

- Is a client web interface included in the price of the software?
- If not, what is the cost of offering on-line access to client inventories?
- Is training provided and are there additional costs associated with training and implementation?
- What are the annual support costs and what do you receive as support?

Make sure your WMS provider can implement and support of all the WMS application software, hardware, wireless infrastructure and network requirements.

- WMS application on Windows server with SQL server license
- Scanner program loaded on the hand held or vehicle mount scanners
- Web application

Example:



Customer Service

The services provided by 3rd party warehouse operations are similar to those provided by the client's financial institution. Deposits and withdrawals of company assets are made and of course there is an expectation that the goods being deposited will be properly accounted for, will be protected from risk and will be made available for withdrawal, in precisely the same quantity and condition as when initially deposited.

Yet the client / warehouse relationship transcends even the client / bank relationship in that the 3rd party warehouse is viewed by its client's customers as an extension of the clients business.

If product is short shipped, damaged or late, it reflects poorly on the client and will affect the relationship the client has with their own customers.

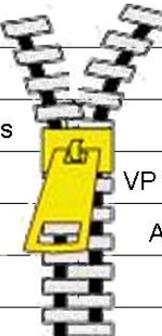
A successful customer relationship, between client and 3rd party warehouse, is ultimately based on trust, timeliness, accuracy and reliability. Sophisticated storage customers *will* want assurances that the warehouse operator has the tools and WMS technology to deliver the service levels expected.

It's important that the warehouse operator clearly understands all of the service requirements expected by the client and it's of equal importance that the warehouse operator knows as much about the client company as possible. Your WMS should be designed to help manage these client relationships and should have the capability of identifying multiple contacts and multiple sites in order for your company to "zipper in" effectively with your customer's company.

Zippering In

In order to establish effective relationships, to know what's going on within your customer's organization and to reduce the risk of losing the business for extraneous reasons, it is advisable to "zipper in" at various levels throughout the respective organizations. The ability to communicate at multiple levels will enable you build sound relationships and effectively convey your commitment to a successful partnership. By having access to key personnel within your customer's organization, issues concerning risk and opportunity can be identified and addressed more effectively.

Client Company	Service Provider
President or GM	President or GM
Operations/Logistics	Operations
CFO/VP Finance	VP Finance/Accounting
Accounts Payable	Accounts Receivable
Shipper	Shipper / Receiver



A Proactive Approach to Customer Service

Your WMS should have features designed to keep you customers informed about important events and transactions. A proactive approach to customer service helps to instill a sense of competence and reliability. Your company will be perceived by your customers as being focused on “doing it right... the first time” and as being easy to do business with.

Accuracy, Reliability & Timeliness

If you walked into your bank and approached the teller intending to withdraw \$100 in cash and the teller wasn't able to confirm that you had enough money in your account to cover the withdrawal, I expect you would be somewhat concerned about their competence.

Accuracy, reliability and timeliness are three of the primary justifications for contracting out in the first place. There is an expectation that the 3rd party warehouse has invested in the technology necessary to handle multi client distribution services and that the ability to spread costs across multiple clients is an advantage that in-house warehousing does not provide.

A well designed WMS will enable the user to conform to a variety of different receiving methods based on the type of business each client is in and how they operate.

It Starts With Receiving

The three most common types of receiving are described below:

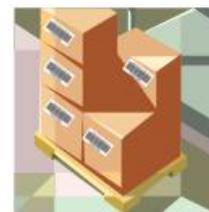
1. Receive common cases, pallets, totes or bundles – variable quantities but 1 sku per pallet
2. Receive multiple unique items (i.e. serial numbered items) and then bundle or associate those unique items on a pallet to a single pallet ID barcode.
3. Receive product by scanning a customer's descriptive bar code which contains all of the relevant data associated with the product.



Common cases or items in – items/cases or pallets out. Ideal for order assembly involving less than full pallet picks.



Individually serial numbered items in, which can be linked to a Pallet ID barcode... then ship individual items or full pallets out



Scan cases labeled with the customer's own descriptive bar code in – ship specific cases or pallets out

Your WMS should be able to seamlessly handle any and all of these three receiving methods using the same hand held or vehicle mount scanner.

The use of wireless scanners enables receiving to be done on a real time basis. This helps to ensure that all inbound products are properly received and are immediately “in the system” for billing and inventory tracking purposes.

However, it’s no longer enough to simply manage inventories levels accurately.

1. Customers want “real-time” on-line access to their inventories.
2. They want to be able to release products on-line.
3. They may also expect access to time and date stamped activity logs.

For example:

- When was the product received – date and time?
- Who received the product?
- How long did it sit on the dock prior to put-away?
- What storage location was it put away to?
- Who put the product away and when?
- Has the product been moved or relocated while in storage?
- Who moved the product, why and when was it moved?
- Who created a pick slip for the product?
- Who picked the product and when?
- Who shipped the product and when?
- Has any information related to the product been changed or edited?
- Who authorized the change, why and when was the change made?

Creating a pick slip

3rd party warehouse operators may use bulk storage areas, racked storage areas or a combination of both. If product is stored in a bulk storage area (no racking), it may be impractical to a create detail (by specific location) pick slip.

General Pick Slip

Often products stored in bulk storage areas consist of large quantities of common product. The client may simply want a specific quantity of a specific product and lot number. The product in question may be somewhere in a row that is stacked 4 pallets high and is 11 or 12 stacks deep. All you may know is that it is somewhere in a specific row. The ability to create a “general” pick means the warehouseman has the option of picking any product which fits the correct product description, lot number and weight or quantity. The scanner program is designed to provide him or her with a list of location options on the scanner.

Detail Pick Slip

For product stored in a racked area, each racked location should be identified with a bar code location tag. The detail pick slip will direct the warehouseman to the precise location of the product being released, indicate the precise quantity to be picked and identify where the picked product is to be staged for shipping. The scanner will not allow the picker complete the pick and or ship unless the proper product bar codes have been located, scanned and selected.

Shipping

Once a pick slip has been completed and the product is staged for shipping, the shipper has the ability to ship from his scanner or his desktop. The advantage of shipping using the scanner is that the shipper can verify that the correct quantities have been picked, prior to the product being loaded on the truck or container. He can then create a bill of lading and packing slip or tally sheet directly from his handheld or his vehicle mount scanner.

Labour Productivity

The ability to accurately receive, put-away, move, internally transfer, track, pick, ship and bill for services is the basic requirement for entry into the highly competitive 3rd party warehousing industry.

The ability to do so efficiently and profitably is the key differentiator between success and failure.

In today's tough job market, it is becoming increasingly difficult to hire, train and retain good employees. The use of technology in the warehouse not only increases job satisfaction among workers and takes much of the stress out of the job; it drastically reduces training time for a large percentage of warehouse workers. It's no longer necessary for employees to learn everything about each customer storing within the facility, the product they are picking or where it is generally stored in the warehouse. All they really have to do is learn how to use the hand held or vehicle mount scanner along with a few basic procedural rules... and they're ready to contribute.

Generally, rates for handling and storage services are developed based on a list of assumptions provided to the warehouse operator by the client. These assumptions may include but are certainly not limited to information such as:

- Average inventory in lbs./ cases / pallets
- Peak inventory requirement
- Average number of pounds/cases per pallet
- The number of SKU's (Stock Keeping Units)
- The number of orders or (releases) per day/ per week/ per month
- The average number of line items per order
- The average number of cases per line item
- The average number of turns per sku or in general

Unfortunately, assumptions don't always prove to be correct and the rates may not accurately reflect the cost of servicing the account. There may be a good explanation regarding why the order profiles have changed since the rate was first developed, i.e. your customer lost his largest customer or the original assumptions were based on blind faith or projections rather than historical movement.

But the fact is, unless you have some way of measuring productivity by account, you may have difficulty in determining which accounts are contributing and which accounts are eating away at margins.

Here is an example:

Analyze profitability, monitor client order pick profiles		
Customer 1 3 line items per order 25 cases per line item Average order - 75 cases		Customer 2 25 line items per order 3 cases per line item Average order - 75 cases
Worker visits 3 locations and picks 25 cases from each location Time: 10 minutes to pick 75 cases Cases picked per man-hour - 450	Worker visits 25 locations and picks 3 cases from each location Time: 60 minutes to pick 75 cases Cases picked per man-hour - 75	
Order assembly rate - \$0.25 per case charged to both customers		
at \$0.25 per case picked, revenue equals \$112.50 per man hour	at \$0.25 per case picked, revenue equals \$18.75 per man hour	

Although this illustration refers to storage customer 1 and storage customer 2, they may in fact be the same customer. The original assumptions may have applied to Customer 1 prior to this storage customer losing *its* largest customer. Losing one large customer could in theory, change the profitability of a storage account significantly.

The ability to monitor order picking productivity will help the warehouse operator identify changes that dramatically impact profitability.

MAXwms Data Flow

