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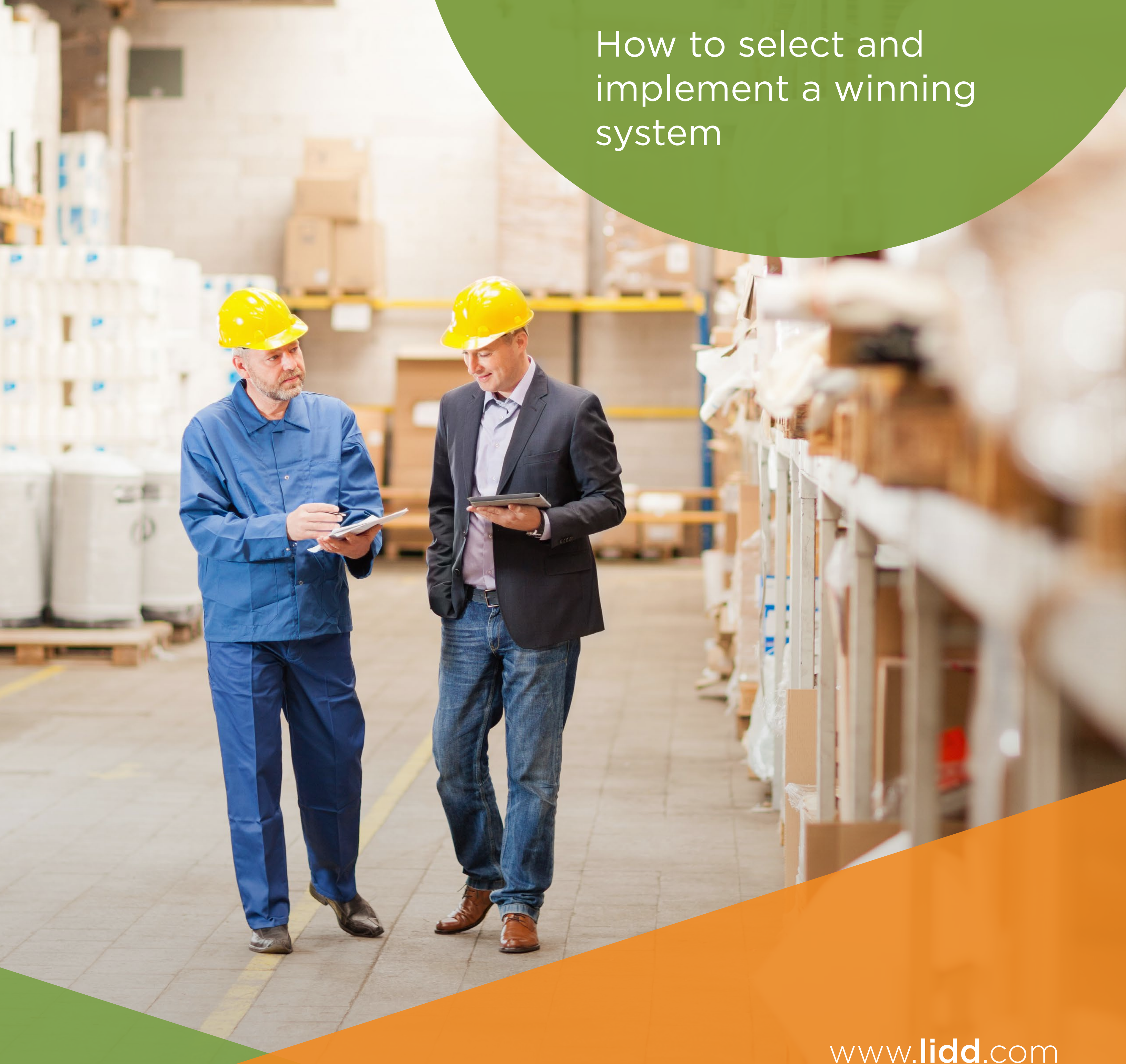
WAREHOUSE MANAGEMENT SYSTEMS IN A DC

How to select and implement a winning system



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ABOUT THE AUTHOR

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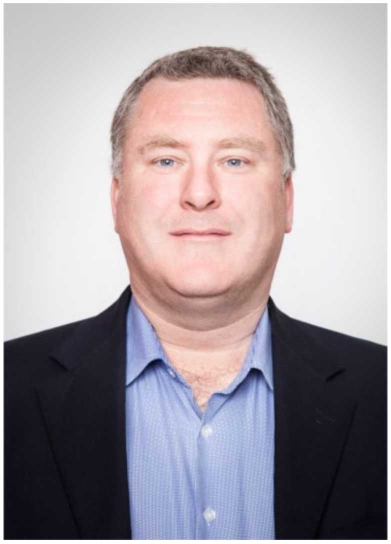

Charles has been working as a supply chain consultant since 1998. He has worked with clients at all levels of the supply chain, from manufacturers to retailers, in a wide array of industries including food, pharmaceuticals, garments and construction materials. He has extensive experience in supply chain strategy, technology, facility design & implementation and operations. Charles holds a Bachelor's degree in Mining Engineering from McGill University in Montreal.

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YOU MAY NEED A **NEW WMS**

INTRODUCTION

A modern, competitive supply chain must have comprehensive warehouse management capabilities, provided either within a company's ERP system or as a standalone WMS.

Like all I.T. investments, Warehouse Management Systems (WMS) depreciate rapidly compared to other asset classes. Buildings may depreciate over 20 to 30 years, while a WMS depreciates in 5 to 7 years because the fast pace of technological innovation quickly renders existing systems obsolete.

This means that companies are frequently forced to make I.T. investment decisions. WMS are no exception with companies regularly engaged in:

- Upgrading versions
- Integrating new technologies (ex. Voice and/or tablets)
- Developing functional enhancements
- Replacing legacy systems with market-leading solutions

This eBook presents guidelines for the successful selection and implementation of a new WMS. No matter where you are in the decision-making process, these guidelines will help you think through important issues before you tie up capital in the wrong solution.

Like all I.T. investments, a WMS depreciate rapidly compared to other asset classes.

SITUATIONS THAT MAY PROMPT YOU TO INVEST IN A WMS:

1 You don’t have a WMS

If your company does not have a WMS, you may suffer from costly errors, low productivity, poor inventory visibility and excessive clerical expenses. Worse, your competition may offer customer service advantages that help them to steal market share.

2 Your existing WMS is inadequate

A WMS that served its purpose a decade ago may no longer support your growing supply chain. Modifying your existing WMS may either be impossible or so costly that it is more cost effective to replace the entire system. It could also be that the software vendor you selected is no longer a good fit for your company’s long-term plans.

Let’s look at three companies with very different supply chains and explore the drivers that caused each to go shopping for a new WMS.

THREE COMPANIES THAT NEEDED A **NEW WMS**

JOHN DOE FOODSERVICE

John Doe Foodservice runs 150 trucks out of a 300,000 sq.ft DC in the mid-west. After an *e.Coli* outbreak in a neighbouring state, the CEO of John Doe Foodservice sets a goal for his company:

> “*We will be market leaders in field to fork food traceability*”

A cross-functional team explores what changes would have to be made to their existing systems to support full traceability with precise, rapid recall capabilities. They determine the required enhancements would be cost prohibitive and recommend replacing their existing system with a new WMS.

WIDGETS.COM

A wholesaler of specialty gifts launched a direct-to-consumer website three years ago. Sales have exceeded projections with no slow-down in sight.

After their third Holiday season, where D2C volumes quadruple, the company realized that its legacy WMS – designed to support large, full case orders – created chaos in the high-volume, split case environment of D2C. Excessive errors, poor inventory visibility and low productivity threatened the viability of this new sales channel.

> *"The company needs a WMS that manages a complex queue of orders"*

The company needed a WMS that could manage a complex queue of orders, create efficient picking assignments and direct full case and split case replenishment tasks so that no picking area would suffer unnecessary scratches.

Their current WMS vendor had no inclination to focus their R&D efforts on developing piece pick functionality since no one else in their client base had similar needs. So, Widgets.com began a search for a new WMS.

TERMINAL MAINTENANCE, INC.

Terminal Maintenance, Inc. maintains 20,000 lottery terminals deployed in public spaces across a western Canadian province. Field technicians are dispatched from three service centers to set up new terminals as well as maintain existing ones in operation.

The high value of parts and consumables required to maintain the terminals means a substantial investment in inventory. With varying warranties and some opportunity to refurbish parts at their service center, optimizing their supply chain could deliver significant savings. Moreover, field technician service calls could be made more productive if technicians had ready access to terminal build lists and visibility of spare inventory in the network.

> “*Service calls could be made more productive if technicians had visibility of spare inventory in the network*”

Terminal Maintenance Inc. recognized that by improving inventory turns, service levels and technician productivity their investment in a new WMS would be returned very quickly.

RISKS OF A **POOR WMS** SELECTION PROCESS

WHAT GOES WRONG IF THE SELECTION PROCESS ISN'T RIGOROUS?

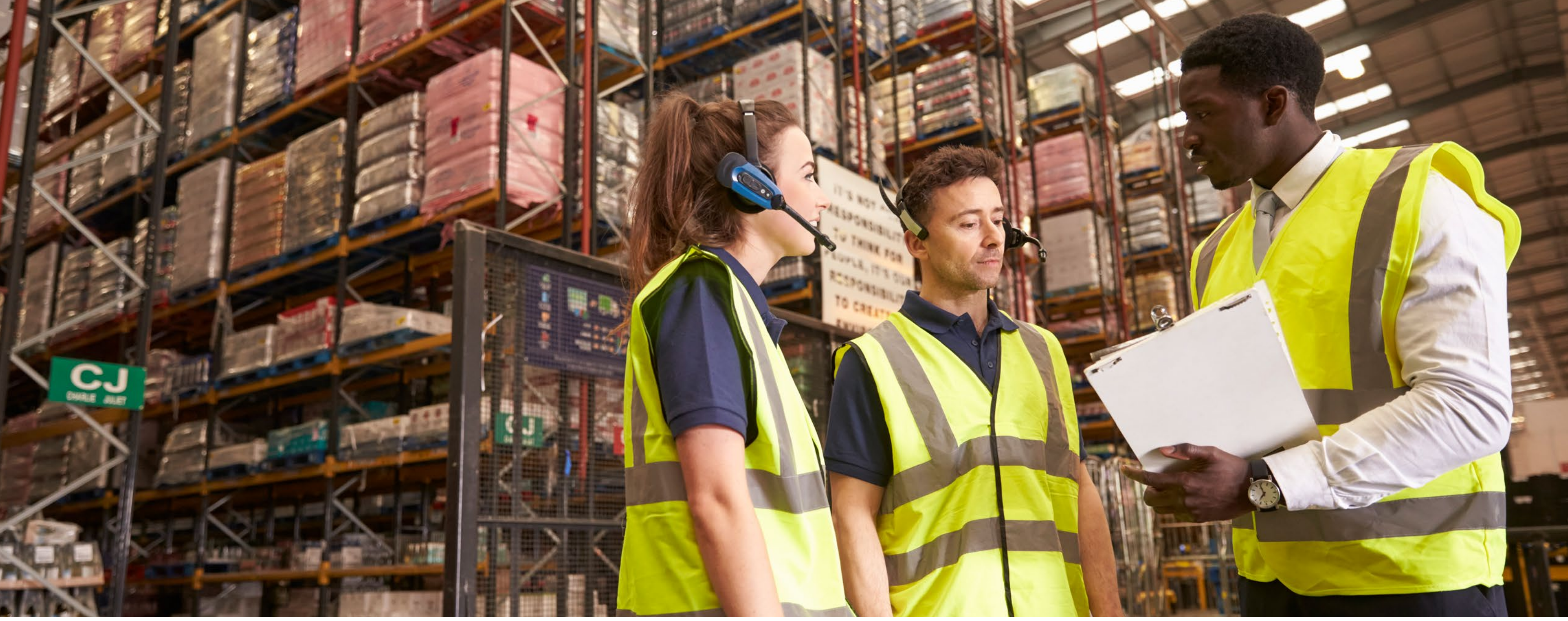
Before John Doe Foodservice, Widgets.com or Terminal Maintenance Inc. began their WMS searches, they each recognized the risks of not following a rigorous enough selection process:

The WMS is an inadequate solution

- Without a rigorous search, thorough vetting and well-managed implementation, you could be left with systems that doesn't adequately address your functional needs. The result is an operating penalty that impacts your supply chain on a daily basis.

The vendor is an inadequate partner

- Vendors make poor partners for a host of reasons: financial instability, owner exit strategies, R&D / marketing focus, poor customer service. One or more of these situations can result in a poor relationship that adversely affects the outcome of your new WMS.

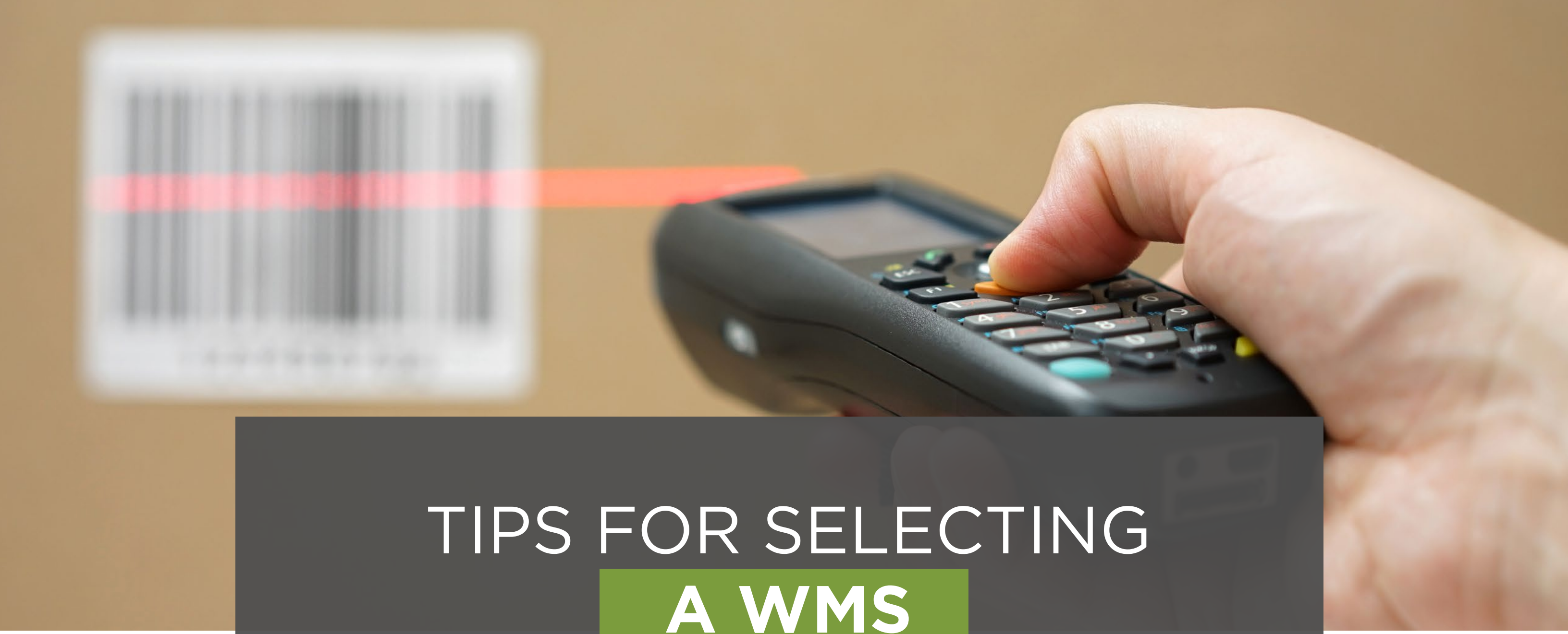


The partnership is good, the WMS is adequate, but the costs are astronomical

- Capital is precious and any growing company has a myriad of initiatives competing for that capital. Investing too much in a WMS not only raises your total supply chain costs higher than necessary, it also robs other initiatives – new stores or sales territories, new product lines – of that precious resource.

Also, keep in mind that implementation fees usually account for 50% of the total cost of a new WMS. That means if you do not budget for it properly, and you allow for scope creep and endless reconfigurations, your costs will grow exponentially.

50% of the total cost of a new system are professional service fees.



TIPS FOR SELECTING A WMS

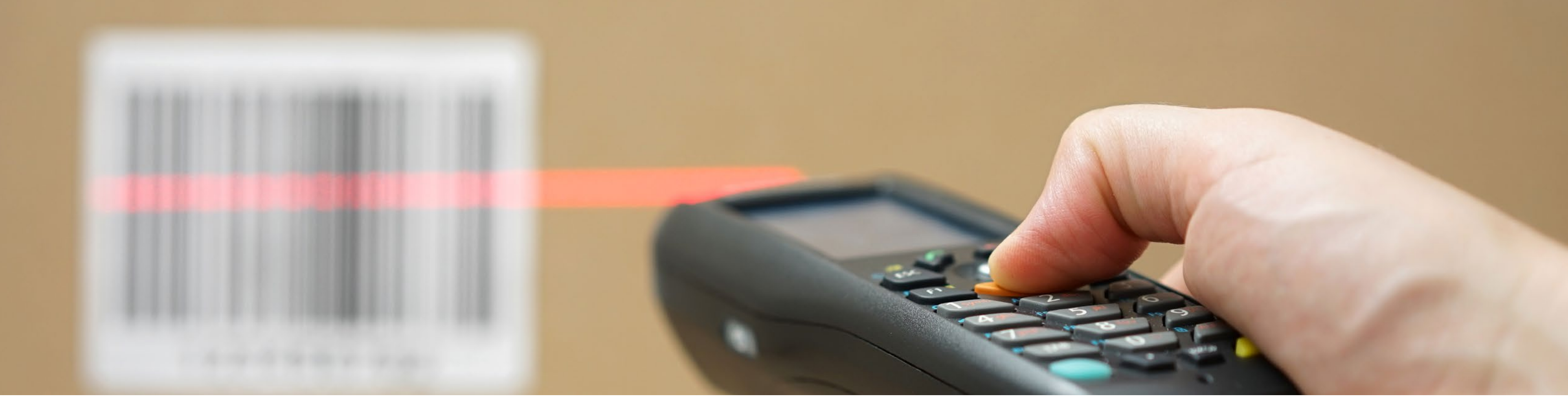
There are 5 basic steps to follow when selecting a new WMS:

1. Clearly define needs
2. Identify potential solutions
3. Create & issue RFP
4. Shortlist solutions for on-site demo
5. Perform due diligence

Step 1. Clearly Define Needs

Vendors need to clearly understand your needs. This allows them to quickly determine if their solution is competitive and assess the scope of implementation. This means creating a document that describes in detail all the processes that you require the WMS to support.

This step is a great opportunity for you to take a close look at your current processes and to reengineer them to make sure that when you do install a new WMS, you aren't installing bad processes at the same time.



CLEARLY DEFINE NEEDS – TERMINAL MAINTENANCE, INC.

Terminal Maintenance found many processes that existed solely due to inadequate IT support. For example, when a damaged part arrived at a service center for refurbishment, the repair technician had to go through a long diagnostic checklist that could have been greatly simplified if that technician had the service history for that part.

Step 2. Identify Potential Solutions

While there are hundreds of WMS solutions available, only a handful are appropriate for your situation.

You should have no more than 10 vendors should bid on your project as it will become too cumbersome for a selection committee to go through and evaluate each one properly – with the potential risk that good options get overlooked.

Important qualifiers are whether they have a proven track record in your industry? How well do they integrate with your ERP system? Often times the WMS module within your ERP may provide a solution that you otherwise might not have considered.

Only a handful of WMS solutions are appropriate to your situation

IDENTIFY POTENTIAL SOLUTIONS – WIDGETS.COM

Widgets.com's existing vendor was not interested in supporting high-volume piece picking operations like their D2C channel. They knew that potential partners would be vendors that had installations in e-commerce and piece picking operations already.

By reaching out to peers with D2C sales channels, Widgets.com was able to draft a list of WMS providers that supported operations similar to theirs.

Step 3. Create and Issue an RFP

The RFP document should have four sections. The first section is the desired state document you created at the beginning of this process. You want to give each vendor a clear picture of what you want to accomplish so that their responses are tailored to your needs as much as possible.

The second section is the functional questionnaire where you ask them to respond to a series of questions to determine whether they can support basic warehouse functions as well as functions specific to your operations.

One of the things we recommend is to not just leave it to yes or no questions, but to include long form questions or mini case studies where you ask how their system handles a certain situation, for example a purchase order with errors on it. This gives the vendor an opportunity to show off their system, but also demonstrates their level of understanding and interest in your business.

You want to give each vendor a clear picture of what you want to accomplish.

CREATING A GOOD RFP – JOHN DOE FOODSERVICE

John Doe Foodservice knew that vendors would check off "yes" to every functional request they made. So they created mini-scenarios in their RFP and asked vendors to describe how their WMS would handle the scenario.

For example:

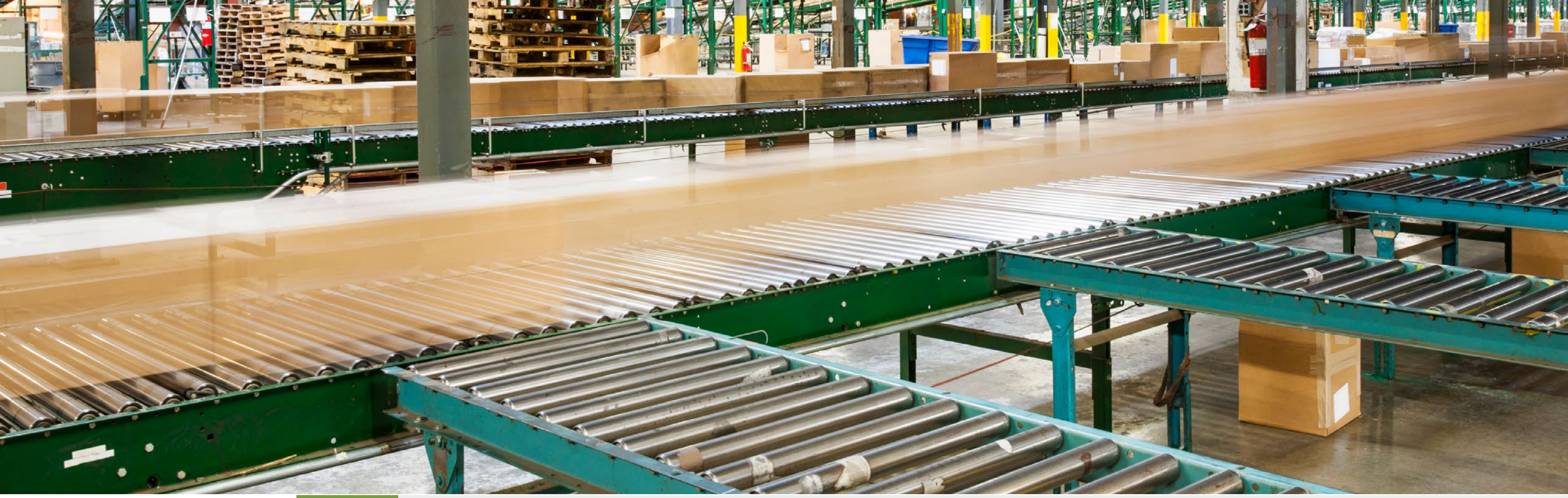
"Our pepperoni supplier issues a recall for lot 17JUL2013. Describe the process your system follows to execute the recall?"

Step 3. Create and issue an RFP *(cont'd)*

The third section is a vendor profile where you want to assess what this vendor looks like and whether they are a good fit for your company.

The final section is a fixed format pricing questionnaire where they will respond not only in terms of total cost to implement the system but also provide unit pricing, so you can understand the variability of their pricing, particularly in terms of licensing and professional service fees.

You need to understand the variability in pricing, particularly in terms of licensing and professional service fees.



FIXED FORMAT PRICING – WIDGETS.COM

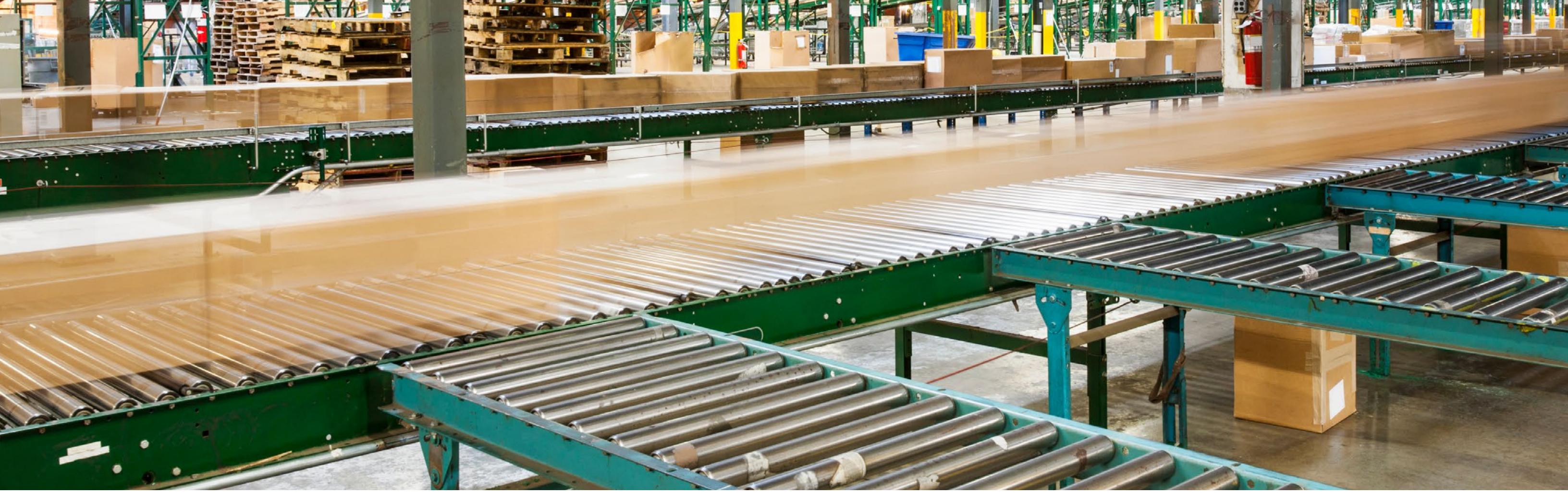
Widgets.com required vendors to submit their proposals according to a fixed format so that the various options could be compared fairly.

While one vendor stood out, its licensing terms meant that during the busy pre-holiday season when volumes quadrupled and the DC filled with temporary workers, Widgets.com would have huge licensing fees to contend with. Once identified, the issue was resolved through negotiation.

Step 4.1. Shortlist Candidates for On-Site Demonstrations

Your goal should be to keep the top three or four potential solutions. You do this by evaluating:

- The functional questionnaire responses using a standardized scoring model that allows you to determine who is providing the best match of functionality to the needs you documented in your request.
- The total cost of ownership. This includes support & maintenance fees for a period of no less than five years and a sensitivity analysis on unit costs (ex. what happens if implementation services are 30% more than projected).



- Vendor performance and compatibility. A vendor's behaviour and profile will leave strong clues as to their suitability as a long-term partner. For example, an unresponsive vendor during the RFP process will not magically turn into a responsive one during implementation.

SHORT LISTING CANDIDATES FOR A DEMO – JOHN DOE FOODSERVICE

John Doe Foodservice put together a 6-member selection committee. Each committee member was asked to score the responses separately and draw up a personal shortlist.

Each member of the committee had the same top 3 vendors. This is not unusual: a well-prepared RFP will make it difficult for vendors to hide their warts and easy for them to demonstrate the power of their solutions.

Step 4.2 On-Site Demonstrations

It is extremely important that you provide a demonstration script to vendors and ensure they follow it to the letter. This includes giving them data they can use to populate their system to show you a real world case study in action.

Each vendor should be given at least six hours to present. There's no way to properly evaluate a system in less time than that. You should also limit the vendor introductions to 15 minutes. If not, they will spend an hour or two happily sharing all sorts of 'About Us' things that will distract you from the actual software demonstration.

Your selection committee should score according to the demo script, and if parts of the demonstration are missing from the demo that should score as a zero.

Finally, soft issues do matter. Each member of the selection committee should ask themselves, *"Do we trust these folks? Do we have confidence in them? Do we think there's a mutual interest in working together?"*

It is extremely important that you provide a demonstration script to vendors and ensure they follow it to the letter.

ON-SITE DEMONSTRATIONS – TERMINAL MAINTENANCE INC.

One promising vendor showed up for its on-site demonstration with Terminal Maintenance Inc. and proceeded to give a power point presentation with screenshots of their system.

After a frustrating 90 minutes, the vendor admitted that the system, as conceived, had not yet been built. They wanted Terminal Maintenance to buy a promise, not a system.

Step 5. Due Diligence

Once the on-site demonstrations are complete, one or two finalists will likely emerge. But before signing a contract, you must perform due diligence.

Visit two or three site references that are similar in scope and nature to your operation. See the system running live and learn what the customer experience was like. Not only implementation, but ongoing support and maintenance as well.

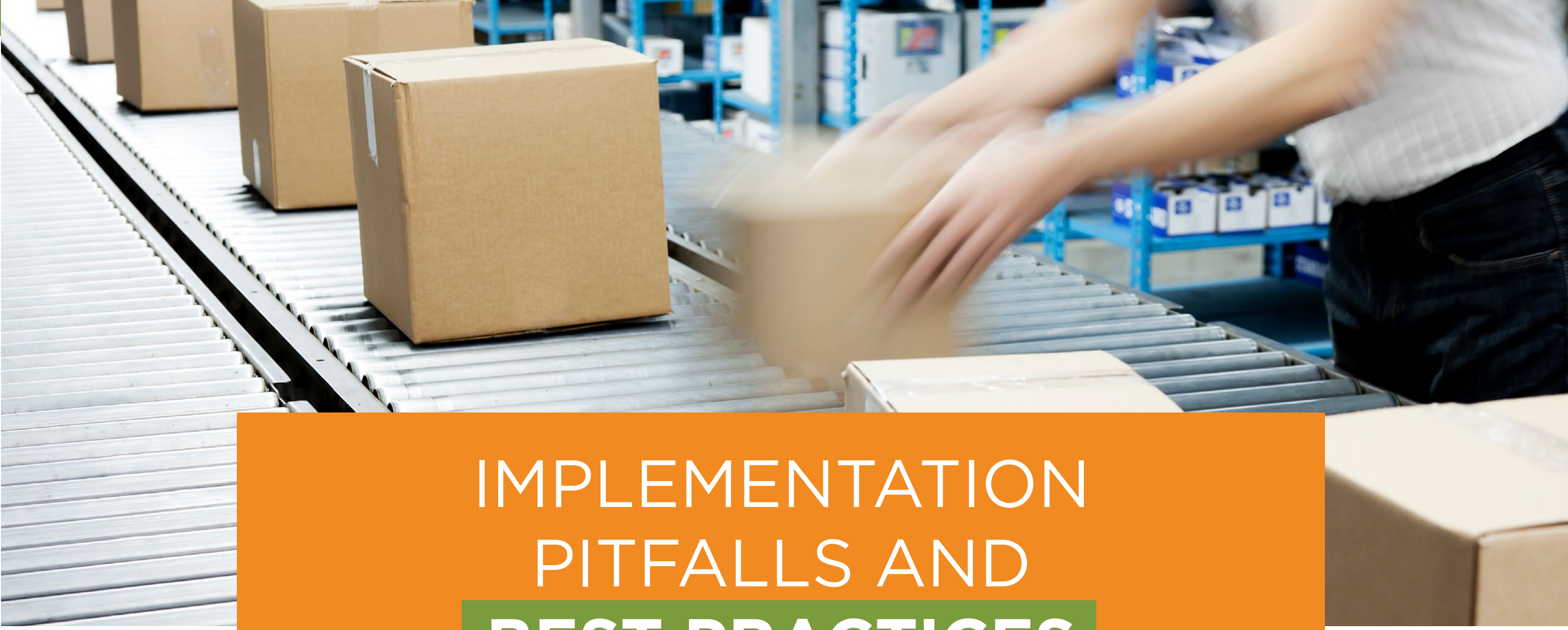
Visit the vendors' offices to get a feel for the people who work there and to test out their customer service hotline.

Following the demonstration there will probably be a list of things that were either unclear or seemed like a miss on the part of the vendors. Schedule a webinar or even a second onsite demonstration to resolve those issues and make sure that there are no loose ends.

Visit two or three site references similar in scope and nature to your operation.

DUE DILIGENCE – JOHN DOE FOODSERVICE

The selection committee visited a reference site for one finalist. From that visit, they not only got a sense of the WMS capabilities, but they also had a great exchange on implementation. Practical advice from the reference helped John Doe to set up their project management controls for implementation.



IMPLEMENTATION PITFALLS AND BEST PRACTICES

PITFALLS

Most DCs don't fully leverage their WMS, largely because of mistakes made during implementation.

The three most common pitfalls are:

- A project is under-resourced. Most people underestimate the amount of work it takes to set up and configure a new WMS. The data cleaning and data populating alone is a large task.
- Spending more time on integration and system modifications than on basic setup and configuration. As a project rushes to meet a deadline basic setup and configuration often get overlooked, which is a huge mistake.
- Not fully understanding the functionality of a WMS until it's up and running, thereby failing to implement or configure the system in exactly the right way.

BEST PRACTICES

John Doe Foodservice, Terminal Maintenance Inc. and Widgets.com operate very different supply chains and had different motivations for acquiring a new WMS. Yet, each followed the same rigorous selection process and the same best practices for implementation:

- **Set go live dates that are realistic and aggressive.**
- **Measure progress ruthlessly. Losing a week is unaffordable.**
- **Prepare to compromise. Not everything should lead to a change order request, new modification and set of code.**
- **Invest time to ensure quality data. The old saying of 'garbage in, garbage out' applies just as much to a WMS as it does to any other piece of software.**
- **identify super-users up front, give them ownership of the project, and give them the tools to succeed.**

If you follow these basic steps you too will enjoy a **SUCCESSFUL** WMS selection project.

Please share this with your team as well as with all the players in your value chain and join in the discussions on our blog and LinkedIn page.

We'd all like to **hear your opinions** and learn from one another's experiences. After all, in a world filled with noise, the only way we can win is to cut through the clutter and invest time and effort in **making real connections.**

CONTACT US

Schedule a **Discovery Call** to talk about your goals & define your needs

Learn More about becoming a client

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