



Extending the Life of Your WMS

**By Robert Kennedy,
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It has served you well for those 10, 15 or even 20 years. Like having to say goodbye to a loyal old dog, at some point it's time to put your WMS to sleep. It's time to get a new one. And like that old dog, maybe you are wishing you just had a year or two more. After all, you've been through quite a bit together. It may not work like it used to, but it's still reliable; comfortable.

Or maybe you just want to take it out back and shoot it – put both of you out of your misery!

When I walk into a warehouse, one of the first questions I ask is “What doesn't your WMS do?” I can always gauge the intensity of the pain by the time it takes to respond. Most of the time, the answer is immediate, with more than a little animation, as if the question has been asked before, and

asked more than once. That's because the warehouse manager answering the question is living with that issue, or issues, every moment of every day. I call it “the List.” Every warehouse manager has one. It's that list of WMS shortcomings that hinder his operations' ability to perform day in and out. There is frustration in the answer. There is a feeling of “if only” in the answer.

And so I ask my question and wait to hear the inevitable response about “the List.”

The List is that set of notes that operations people carry around in their heads. From company to company, a lot of the items on the List are the same: complaints about inventory visibility and performance tracking. But every operation has their unique items as well, things their business requires that their WMS system doesn't do, or does poorly. Lots of time the List centers around receiving, where the check in process re-

quires too many steps, or works too rigidly. “Can't we just take some of these fields off the screen? We have never used them.”

Why legacy systems stick around?

Having the opportunity to visit dozens of companies each year, I am still surprised by the number of DC operations using legacy WMS systems. By legacy, I mean “old.” Some are proprietary, growing out of proprietary Accounting or Order Management systems. Some were originally purchased but the vendor is long gone. In every case, the software has become very difficult and expensive to maintain and to change. And risky! Changes to one line of code cause a ripple effect in other parts of the system not expected, even impossible to foresee because of the jumble of code that, like rubber bands and scotch tape, hold the fragile thing together. The architecture may be old as well, even nearing extinction. I still see WMS

systems that are mainframe based, with green screens, and working with character based telnet RF's, circa 1990 something.

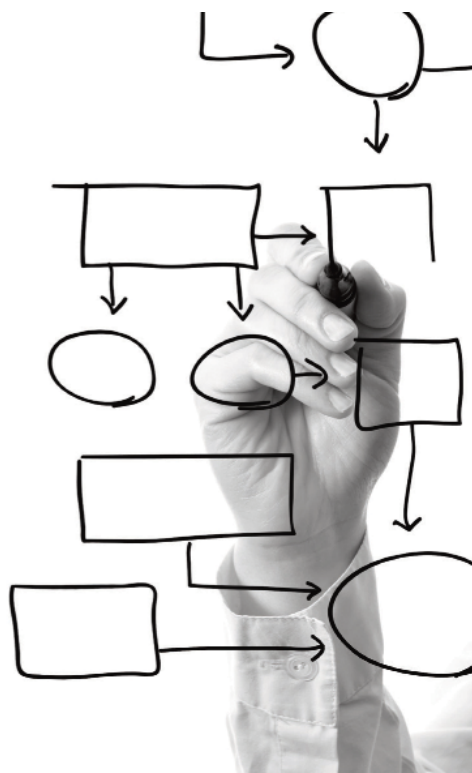
But maybe even more difficult a challenge is the fact that often the code in these WMS systems evolved around the specific needs of the business as the business evolved. So the software is designed to work only one way. It is not flexible. It is not designed to be changed easily. Why would it be? These systems were never intended to be brought to market to serve any needs beyond those of that specific business. Even though you managed to change the system to keep it current with dynamic business changes, it's likely that you weren't able to keep up. Now your old dog system is limping along, running slower, not as capable as it used to be, needing more care, and as a result making your operation a lot less productive than it used to be.

Then there's the cost to replace it! You will be faced with license fees for the new WMS, ranging from about \$1,500 to nearly \$4,000 per user. The implementation service fees will be to at least the same as the license fees and will likely approach twice that amount. On top of all of that, you have the ongoing annual maintenance that will be in the 20-25% range of the license fees. So, an operation with just 50 users is looking at a minimum investment of close to \$200,000 in vendor costs alone - just for the first site. Minimum. Probably twice that. The total cost of implementation will be much more when you include your internal

cost, from IT, from your operations staff, as well as the cost of overtime and the cost of disruption to the operation.

Teaching an old dog new tricks

What if you could get that extra year or two or five out of that old dog of a system? What if you could continue to enhance your system without having to call the vendor; without having to touch the source code; and with minimal help from your always too busy IT staff?



Adaptive software. Adaptive software products are arriving on the market. These are products that enable you, the user, to extend the functionality of your current system by building on top of it. Essentially, these are programming platforms that automate the process of building new features and functions so that users can contribute more to the extension of the system. They use application technologies available today

to interact with the WMS databases for extraction, insertion and visibility.

Let's assume you want to build a new screen. The adaptive software tool will support you by making the process pretty much an exercise of point and click. You want a text box? Put it front and center. You want a pull-down menu? Just specify the values. You want a BACK button? Put it in the bottom corner next to the EXIT button. You want to get a little more complex with your screen by validating values or by pulling data from the WMS? The adaptive software system will facilitate the process of writing simple scripts (call them Apps) to do so.

In the end, you just built that new screen quickly, inexpensively, and without the need for a lot of technical help. Take that concept and extend it into redesigning screens for receiving, for packing or for visibility. Create personalized RF dialogues that more closely mirror your requirements, and maybe reduce the number of messages or buttons your users have to hit. . The scope of what you can do is dependent only on the time you are willing to invest in creating the App yourself. The point is, it's your decision.

Going Beyond

As a real life example, an electrical components distributor for many years wanted to do a weight check or their small parts picking. They wanted to integrate the check into their picking operation, but, doing so was not an option with the vendor. Using an adaptive software

product, they were able to create a new message stream themselves complete with weight validation logic. Now their picking operation is faster, picking is more accurate, and inventory integrity is better. And, they did the entire enhancement themselves.

Another company chose to use an adaptive tool to create new screens to collect international shipping information. They chose to do so because the alternative of having a vendor create new screens to do the same thing was estimated to cost twice and much, and take twice as long.

Adaptive software platforms can be used in ways beyond building new enhancements. Imagine having a template that could be used to create your own Computer Based Training system? Users can create dialogues to take a trainee through his or her instructions, complete with illustrations and hands on practice. Users are enabled to build these things themselves, which also means they can be quickly changed or adapted.

The same could be said for testing and quality programs. For that matter, imagine being able to use a template to reconfigure your WMS when you add a new extension to the building.

In the coming years adaptive software systems will fundamentally change the relationship between vendor and customer. Consider that a vendor who offers an adaptive tool with their core product will not need to develop custom enhancements. Vendors will embrace these platforms as a means of extending their offering. Vendors will be able to focus on advancing their products in concert with market trends, and won't have to focus nearly as much on specific customer requests. It won't be long before evaluations of WMS systems will include questions about the robustness of the vendor adaptive software module.

Companies will adopt them as a means of reducing costs and positioning their business to make adaptations even faster than they

are required to do today. Adaptive software products will become a strategic part of a company's overall software platform. IT groups, after all, struggle with their own List, one that is usually much longer than the one the operations teams carry around. IT groups will be able to move forward with more strategic projects, content that their users are being served by their adaptive software to handle most of the requests that today would fall on their shoulders.

I am hopeful that in the coming years, even next year, when I see that warehouse manager again and ask my question, I'll get a robust response explaining how it doesn't really matter because he or she can fill the gaps with their adaptive software tool. I am hopeful that there will be a new list that will be a collection of Apps that the team crew have created that fill the gaps, extend the software, and enable the operation to keep improving.

New life for that old dog!

About the Author

For more than 30 years, Bob Kennedy has planned, developed and implemented leading-edge supply chain execution systems around the globe. Bob has led more than 100 large-scale implementations of WMS in more than 15 countries and a variety of industries. He has earned an industry reputation for quality and a track record of successes. Bob is a partner at DMLogic, a team of WMS experts who provide services, support and WMS products. He is a member of MHI and CSCMP, and is a frequent presenter at conferences including ProMat, MODEX and WERC and CSCMP. Bob has a BS in Industrial Management from Carnegie-Mellon University.

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