



COMMON WMS DEPLOYMENT CHALLENGES FROM AN SAP LOGISTICS CONSULTANT

Every [Warehouse Management System \(WMS\)](#) project has challenges to be met and hurdles to overcome – that is a given. But one of the keys to success is knowing what those challenges and hurdles are likely to be and putting plans in place to avoid them as much as possible.

In my 40 years of designing, coding, and implementing WMS solutions, I have seen eight things that are both common WMS deployment project challenges AND things that can be minimized, if not completely avoided, with advanced planning. To help make your WMS deployment smoother, I've outlined those challenges and how to mitigate them below:

#8 Bad WMS/Material Master Data at Go-Live: Probably the most common challenge faced in WMS deployments is [master data failures](#). Master

data errors cause delays in the process and create frustration on the part of the system users. Fortunately, the fix is generally simple once diagnosed. It might take some digging to find the incorrect data element, but once found, you correct the master data and move on. And even more thankfully, once you've trapped and corrected a master data error on one material, you no longer have the issue for that material. So, over time, the number of master data errors decreases as they're identified and corrected.

That said, the better approach, rather than trapping and correcting them, is to avoid them in the first place as much as feasibly possible, which can be done through an extensive master data cleansing early in the project. Much of this can be completed while the IT analysts, subject matter experts (SMEs), and consultants are doing requirements gathering, designing the WMS solution, and building the system. Focus a team of people on cleansing the material master data as thoroughly as possible, removing (or flagging as obsolete) any [materials no longer in use](#). Verify that weights and dimensions recorded in the system for materials are accurate as well as the shelf life of items that have them. In short, validate and verify as much of the material master data as possible while the system is being created. Then, it's only necessary to add the placement and removal strategies for the materials once those have been defined and determined.

#7 Not using Barcode Scanning: In some WMS projects, the decision is made to not use barcode scanning to confirm the placement and removal of materials into locations – oftentimes, this is due to the process being deemed “too complex” to deploy for the users. However, the decision to not use barcode scanning would be a mistake.

Not using barcode scanning to confirm movements slows down every process and leads to increased data entry errors, which causes downstream delays and a decrease in inventory accuracy. The bottom line is that you're spending a lot of time, effort, and money to [implement a WMS](#). Don't sabotage your own project by not incorporating barcode scanning into your solution. It can be done with “radio frequency (RF) guns,” tablet devices, or PCs with scanners; whichever you choose, just be sure to



leverage barcode scanning every time you confirm the material and/or location transacted upon in every process in the warehouse.

#6 **Waiting Too Long to Figure Out Bin Label Specifics:** Assuming you've not made mistake #7 above, a common cause of delays in a WMS project is not confirming the details of the location bar codes in the warehouse early enough in the project. This frequently causes the Go-Live date of the project to be pushed back. Lots of decisions have to be made and labels created then tested before the optimal size, makeup, and placement location is finalized. Questions like, *"Where will we place the location labels?"*, *"How big should they be?"*, *"Can the scanners read them from where the workers will be scanning from?"*, and *"What is the scan reliability?"* should be determined for all areas of the warehouse in order for the labels to be created and placed well in advance of the system test cycle start dates and to avoid project delays.

#5 **You don't invest in a RF Site Survey:** If the WMS Solution will depend on a Wi-Fi network to conduct the warehouse transactions, it's a mistake to NOT have a RF (radio frequency) Site Survey done. This is the only way to confirm that there are enough Wi-Fi access points and that they are strategically placed so that transactions can be quickly and accurately performed without transmission issues. Every area of the warehouse must be tested for RF signal strength and have sample transactions performed to verify the system reception and response is acceptable. Recognize that racks full of product or tall stacks of materials on pallets can degrade signal strength, so err on the side of having more than enough Wi-Fi access points rather than too few. Skimping on the expense of this testing can sabotage an expensive WMS project and be harder to correct after Go-Live when the warehouse is operational on the WMS.



#4 **You Don't Test Printers, Labels, and Forms Early Enough in the Project:** Another common mistake in WMS projects is not deciding on the exact printers you will use for labels and forms (and designing those labels and forms) in enough time to incorporate them in all levels of system testing. Label printers can be notoriously fussy and need to be tested for reliability well before your business operations are dependent on them. Even determining where the printers will be located and getting them communicating with the network can be more challenging than expected. It often takes many design iterations of the labels and forms to ensure they have the necessary information to support the processes, are readable by humans, and consistently scan with the chosen equipment.

#3

You Don't Test Your Interfaces Enough:

If your WMS solution has interfaces to external systems – such as the underlying ERP system, a transportation planning system, logistics provider systems, parcel shipping systems, etc. – be keenly aware that those interfaces are very likely to be places of data failure. And if they fail, they will cause painful business process delays, almost always at critical times, hindering your ability to execute business as usual. This is a fact. The only way to avoid this is by testing – lots of it. Test the interfaces, test them again, then test them again. And then, when you think you have tested them beyond any chance of something going wrong....test them one more time. Make sure that any likely failures are documented, as well as the steps required to correct the failures, so that when the business is delayed, the corrections to be taken can be quickly determined and performed. Testing and documenting failure correction steps are the only defense against a business that is at a standstill because an interface has failed.



#2

You Don't Use System-Directed Putaway:

One of the most valuable features of any WMS is the ability to have the system determine the optimal putaway location for materials when taking them from the receiving dock into the warehouse. This is done according to logic rules specific to that product based on many factors, like movement velocity of the material. You want fast movers in locations that are closer to the shipping dock and at lower, easier-to-pick-from levels, while slower movers should be placed in less accessible locations further back in the warehouse. Weight of the pallet can be a factor if some pallets are too heavy to be placed on upper racks and instead should be placed on floor locations. The presence of the same material/lot combination in the warehouse would suggest that the new pallet be placed with that material/lot combination not separated from it. These are just some examples of things what would cause a WMS solution to pick specific locations for a product to be put away into.

Yet far too often, organizations chose not to apply this logic during a WMS implementation, or if they do, they allow the warehouse associate to override the suggested location and choose a location. If left to decide, human nature dictates people will usually just select the first location they can find that seems appropriate. They want to get the product put away as fast as possible and move on to the next task. But this generally leaves products being put away in a manner that is less efficient when it comes time to pick them.

The efficiency of the outbound process is directly related to how strategically materials are placed into the warehouse. I like to use the analogy of the human brain and muscles. The brain figures out what the body needs to do and sends a signal to the muscles as to what needs to happen. The muscles then move in accordance with the brain's desire for specific movements. In the warehouse, the WMS and the people who built the rules are the brains. And the warehouse associates are the muscles. We don't let the muscles make decisions about what to do. The WMS system does that. Spend the time to

build smart logic into the system and insist that the [warehouse personnel](#) execute the instructions driven by that logic. Your warehouse will run more efficiently for doing so.

And the biggest mistake people make when implementing a WMS is.... drumroll, please....



Not Getting the Warehouse Associates Heavily Involved in the WMS Solution Testing: It

goes without saying that the WMS should be extensively tested before going live, and [users should receive training](#). Most firms recognize this and perform extensive solution testing as well as conduct some level of user training. But where WMS project leaders often miss the mark is by not doing several rounds of “Simulation Testing” or “Day in the Life Testing” where users actually work against real orders in the new system being tested. All users should pick orders, put orders away, cycle count, replenish bins, etc., using the new system before it goes live. This reinforces the training they’ve received and, if performed enough, can drive users’ full adoption and absorption of the new system BEFORE Go-Live. It also helps identify system errors or process inefficiencies that often aren’t discovered until after the Go-Live.

System designers often can’t imagine all the possible challenges a user will face when using a future system. Conducting simulation testing exposes those challenges in time to address them BEFORE the business is depending on the system and the people to be their very best! This generally involves staging data in the test system (inventory in locations) in order to pick them, but it’s very much worth the effort. Your team will be much more comfortable with the system, and you will have a better, more [effective warehouse management system](#) if you involve the users in the testing heavily before signing off to Go-Live.

ENSURING A SUCCESSFUL WMS DEPLOYMENT

Do any of these challenges sound familiar? In my experience, these eight factors can lead to failed [WMS deployments](#) and lots of headache for stakeholders. Keep these eight challenges in mind for your next WMS deployment to ensure a successful implementation. If you’re looking for further guidance, [connect with one of our WMS experts](#) today.

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